EXHIBIT 1

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

POWER INTEGRATIONS, INC., a Delaware corporation, Plaintiff, v. COGNIPOWER LLC, Defendant.	Civ. No. 20-15-CFC

POWER INTEGRATIONS' DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS

Plaintiff Power Integrations, Inc. ("PI") submits the following infringement claim charts, attached hereto as Exhibits A ('011 patent) and B ('486 patent), which relate each representative accused product to the asserted claims. This disclosure of infringement claim charts is based upon information reasonably and presently available to PI, without the benefit of complete formal discovery, complete core technical document production from CogniPower, or any meaningful disclosures from CogniPower.

Because discovery has just begun, these disclosures are based solely upon publicly available information. PI's investigation of the matters disclosed in its Infringement Contentions is ongoing. PI anticipates that the production and review of documents and information by CogniPower may lead to the modification of these Infringement Contentions. Accordingly, PI reserves the right to amend, modify or supplement these disclosures based upon further discovery and investigation. PI reserves the right to amend, modify or supplement these Infringement Contentions based upon the manner in which the claim terms in the Patents-in-Suit are construed by the Court and/or based upon claim construction positions taken by CogniPower.

(a) Infringed Claims

PI asserts that CogniPower infringes claims 1, 8, 9, and 17 of U.S. Patent No. 9,374,011 ("the '011 Patent") as set forth in the following sections.

PI further asserts that CogniPower infringes claims 1-3, 5-9, 11, 13, 16-18, 20-23, and 25-26 of U.S. Patent No. 9,166,486 ("the '486 Patent"), as set forth in the following sections.

The '011 and '486 Patents are collectively the "Patents-in-Suit." The specific claims therein that CogniPower is accused of infringing are hereinafter collectively referred to as "Asserted Claims."

(b) Accused Products

Based on the information presently available to PI, at least the following products are accused of infringing the following Asserted Claims of the Patents-in-Suit (the "Accused Products"):

- CogniPower's "Demand Pulse Regulation (DPR)" power supply product, for example, as demonstrated in CogniPower's 2019 APEC presentation entitled, "Simplifying Efficient Low Power AC/DC Converters" and accompanying prototype.

PI asserts that CogniPower has directly and/or indirectly infringed the Asserted Claims by making, using, offering for sale, selling and/or importing into the United States the Accused Products; and/or actively inducing others to use the Accused Products in an infringing manner; and/or otherwise contributing to the infringement of others.

Because discovery has just begun, PI reserves the right to add or modify the identification of the Accused Products to identify additional infringing apparatuses, products, devices, processes, methods, acts or other instrumentalities after conducting discovery in this matter.

(c) Infringement Charts

Subject to the above limitations, Exhibits A and B are claim charts setting forth the Asserted Claims of the Patents-in-Suit and how each Accused Product infringes the Asserted Claims. These charts also describe, by way of illustration, the features and/or functionalities of the Accused Products believed to infringe the Asserted Claims of the Patents-in-Suit.

Because discovery has just begun, PI reserves the right to add or modify the identification of the Accused Products to identify additional infringing apparatuses, products, devices, processes, methods, acts or other instrumentalities after conducting discovery in this matter.

(d) Indirect Infringement

PI asserts that CogniPower directly and/or indirectly infringes the Asserted Claims by making, using, offering for sale, selling and/or importing into the United States the Accused Products; and/or actively inducing others to use the Accused Products in an infringing manner; and/or otherwise contributing to the infringement of others. Because discovery has just begun, PI reserves the right to add or modify its bases for indirect infringement to include additional detail regarding CogniPower's acts that contribute to or are inducing the direct infringement.

(e) Literal and/or Doctrine of Equivalents Infringement

PI asserts that each element of each Asserted Claim is literally present in the Accused Products. To the extent that any elements of the Asserted Claims are not literally present, PI asserts that each element of the Asserted Claims is present under the doctrine of equivalents because any differences between the features of the Accused Products and the corresponding claim elements are insubstantial and/or that these features perform substantially the same functions in substantially the same way to achieve substantially the same result as the corresponding claim elements.

(f) Priority

The Asserted Claims of the Patents-in-Suit do not claim priority to any earlier application. PI contends that the clamed inventions were conceived of no later than June 10, 2011, and PI's inventors thereafter worked diligently to reduce them to practice.

(g) Instrumentalities Practicing the Claimed Inventions

The following Asserted Claims of the Patents-in-Suit are practiced by Power Integrations' InnoSwitch and InnoSwitch3 families of products:

InnoSwitch: '011 claims 1, 8, 9, 17; '486 claims 1-3, 5-8, 21-23, 25

InnoSwitch3: '011 claims 1, 9; '486 claims 1-3, 5-9, 11, 13, 16-18, 20-23, 25-26

(h) Timing of First Infringement, Start & End of Claimed Damages

PI identifies the timing of the point of first infringement of the Patents-in-Suit to be CogniPower's advertising and offer for sale of the Accused Products at the APEC convention in March 2019.

Damages for infringement of both of the Patents-in-suit start at the date the complaint was filed in this case, January 6, 2020.

PI damages as a result of CogniPower's infringement of the Patents-in-Suit are ongoing and will last until the expiration of the Patents-in-Suit, assuming continuing infringement by CogniPower.

(i) Willful Infringement

PI does not currently allege willful infringement. However, because discovery has just begun, PI reserves the right to assert willful infringement and amend this response to include the basis for such a claim.

Document Production Accompanying Disclosure of Asserted Claims and Infringement Contentions

Accompanying this statement, PI is producing and identifying relevant, non-privileged documents required under paragraph 6 of the Court's default Scheduling Order.

(a) N/A

(b) **Conception and Reduction to Practice**: PIC00000561 - PIC00001738; PIC00003051 - PIC00003206.

(c) **File Histories**: PIC00002413 - PIC00002666; PIC00002671 - PIC00002901

(d) **Assignments**: PIC00002667 - PIC00002670; PIC00002902 - PIC00002905

(e) **PI Practicing Products' Documentation**: PIC00001739 - PIC00001847; PIC00001849 - PIC00002412; PIC00002906 - PIC00003050.

PI reserves the right to supplement its production as deemed appropriate and necessary in the future, including when CogniPower provides relevant discovery.

Dated: October 26, 2020

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ATTORNEYS FOR PLAINTIFF
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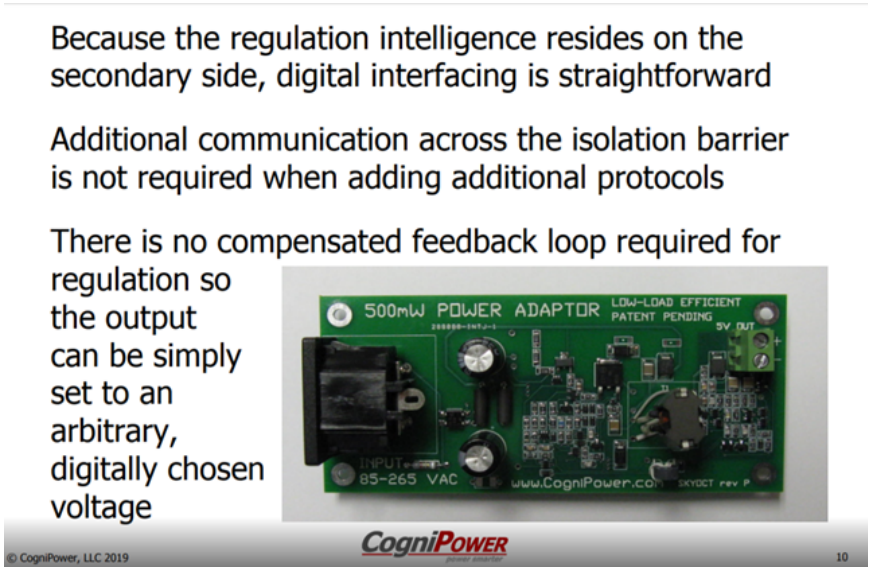
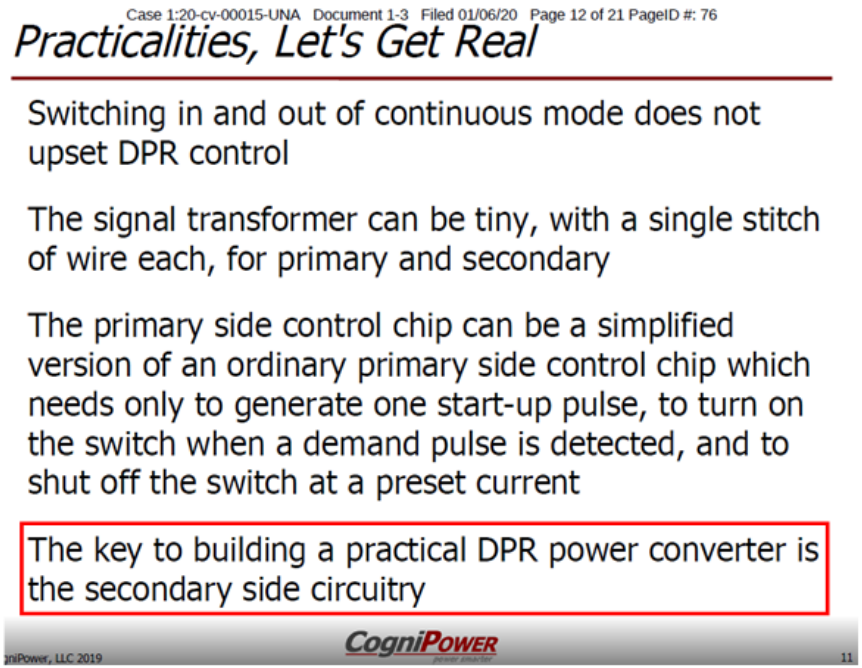
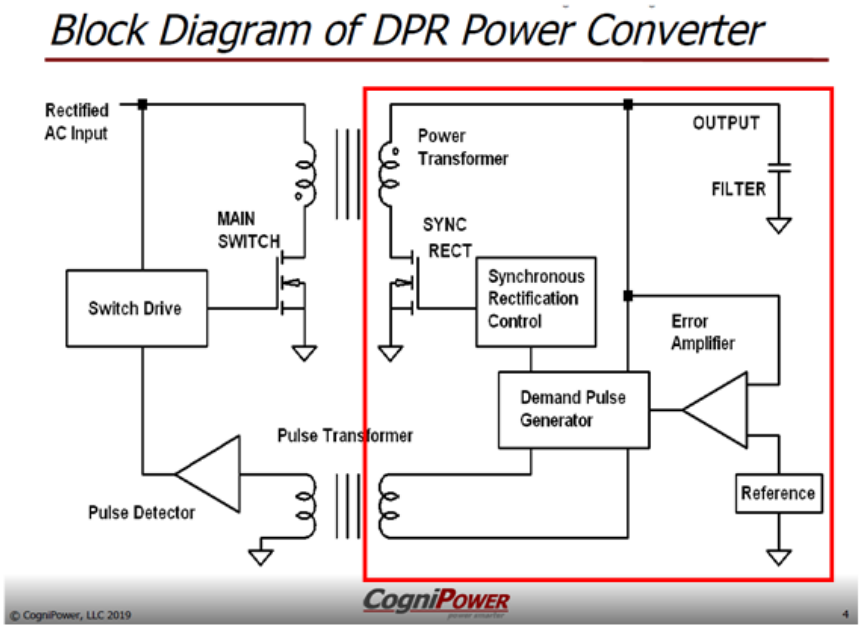
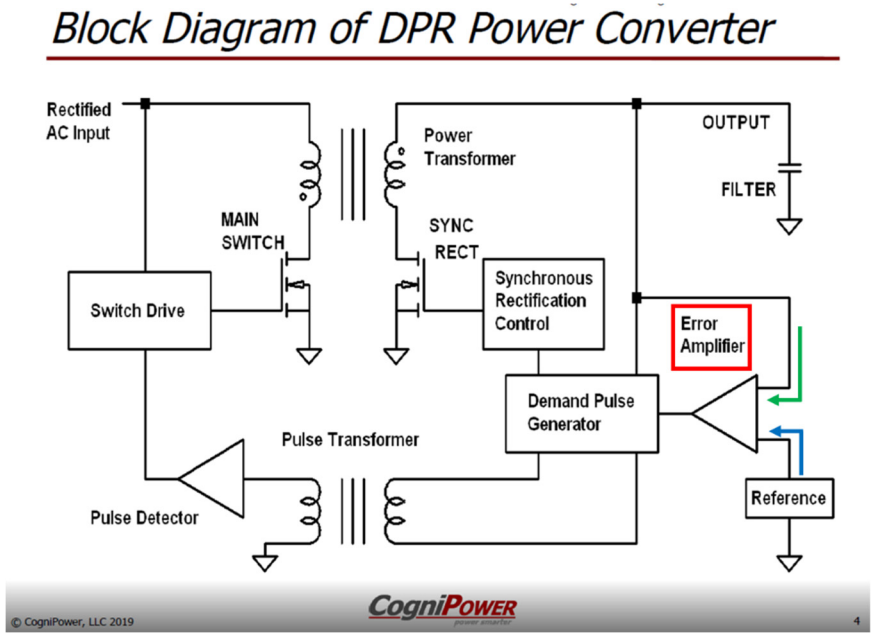
Exhibit A

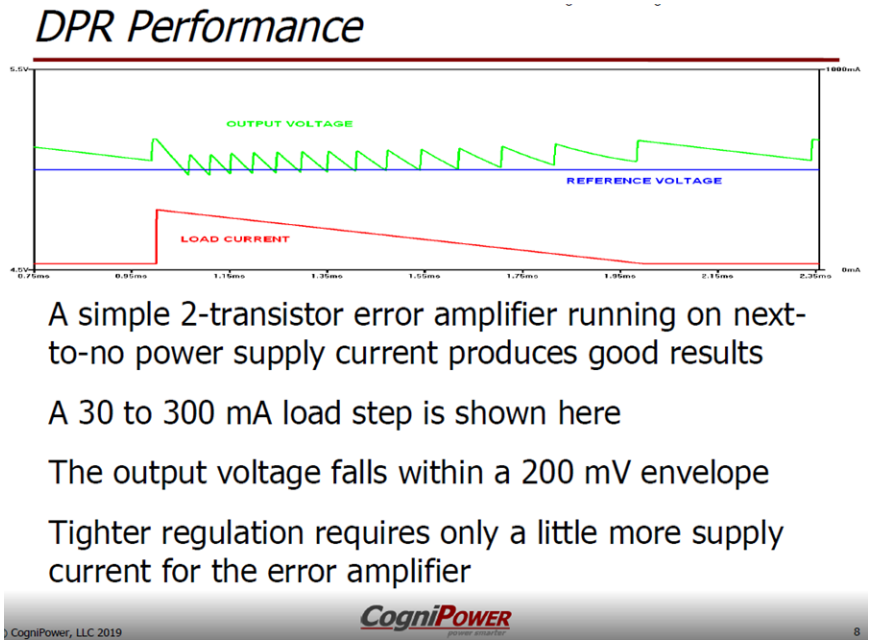
Initial Claim Chart for U.S. Patent No. 9,374,011 ("the '011 Patent")
(Claim 1)

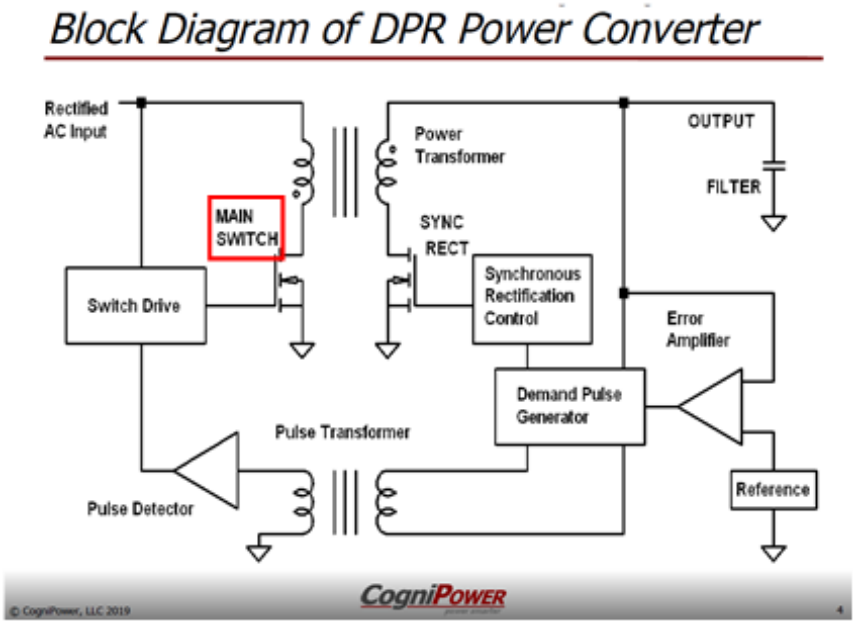
'011 Patent Claim	**CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")**
1. A secondary controller for use in a synchronous flyback converter, the secondary controller comprising:	The DPR Product includes a secondary controller for use in a synchronous flyback converter. *See* APEC Presentation slide 10.  APEC Presentation at 10.

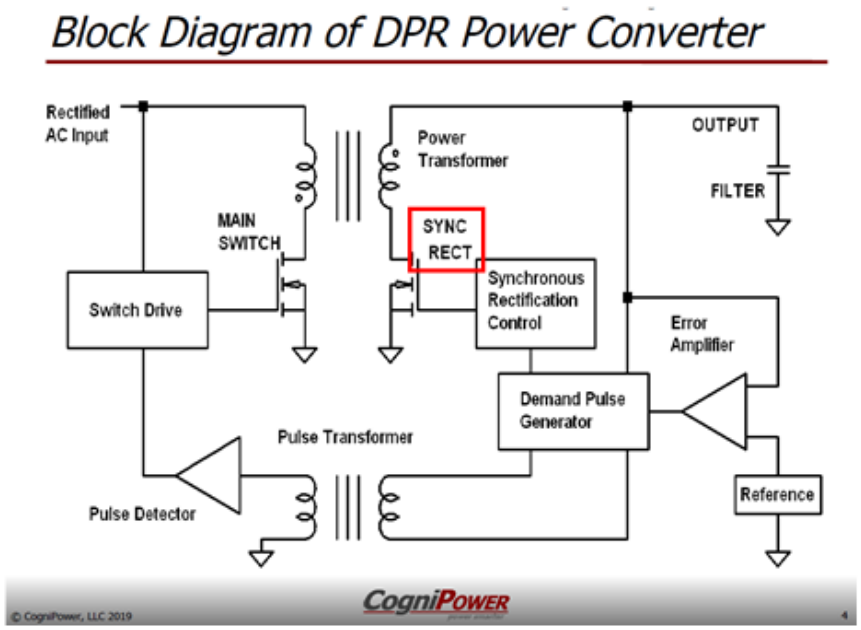
’011 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	   APEC Presentation at 11 (red annotation added).

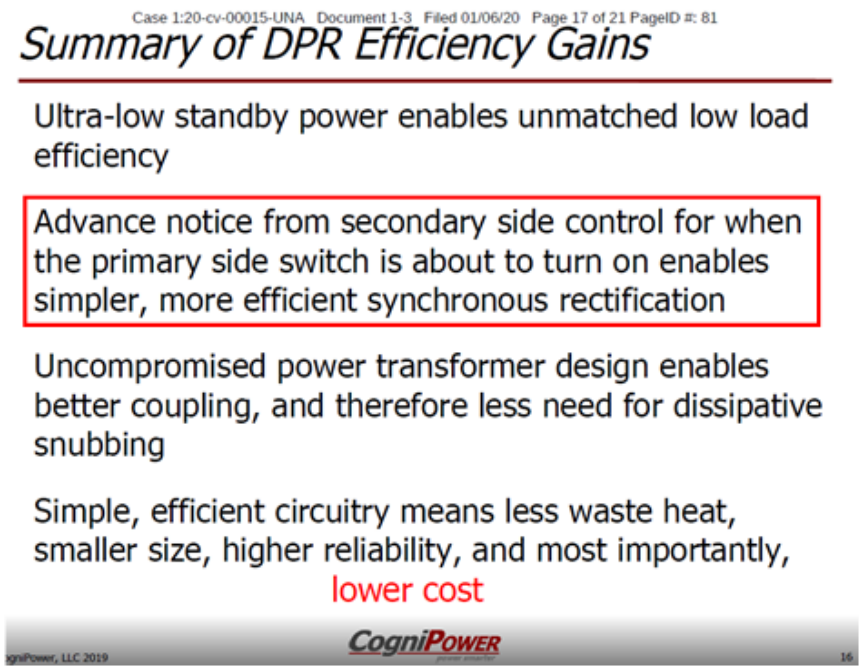
'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 4 (red annotation added).
a comparator coupled to generate a compare signal in response to a comparison of a threshold to an input signal representative of a secondary winding voltage of the synchronous flyback converter;	The DPR Product includes a comparator coupled to generate a compare signal in response to a comparison of a threshold to an input signal representative of a secondary winding voltage of the synchronous flyback converter.

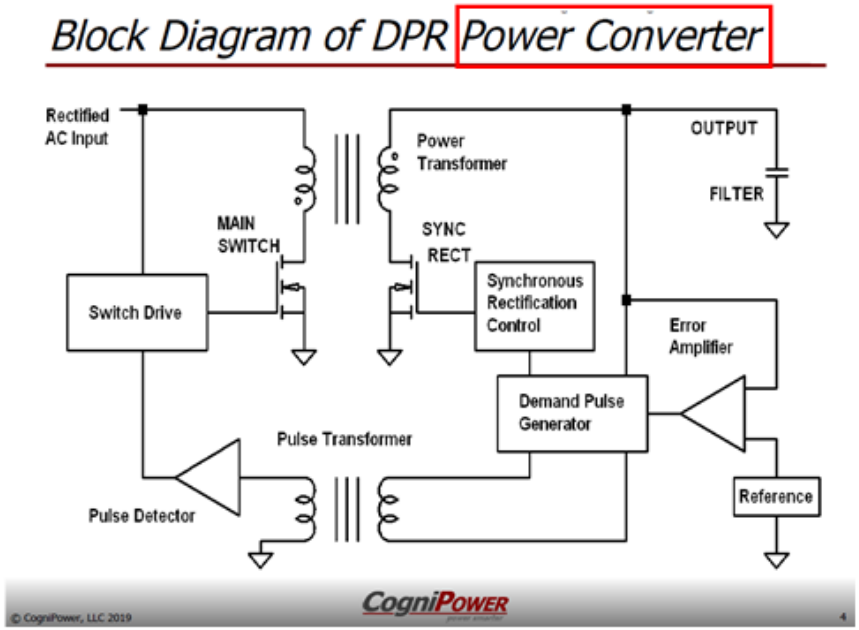
’011 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 4 (annotation added). The error amplifier is coupled to generate a compare signal based on the comparison of a threshold (blue, labelled “Reference”) and an input signal (green) representative of the secondary winding voltage (shown as coupled to the secondary winding of the “Power Transformer” and input to the “Error Amplifier”), as shown in the APEC Presentation on slide 4.

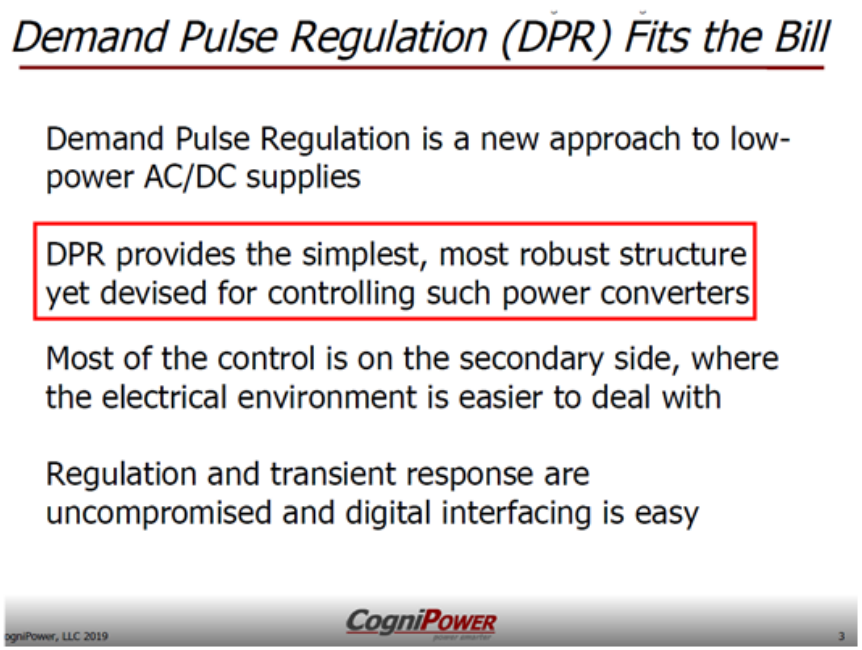
'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 8.
a drive circuit coupled to generate a drive signal to control a first switch to be coupled to a primary side of the synchronous flyback converter, wherein the drive signal is coupled to be generated by the drive circuit in response to a feedback signal representative of an output	The DPR Product includes a drive circuit coupled to generate a drive signal to control a first switch to be coupled to a primary side of the synchronous flyback converter, wherein the drive signal is coupled to be generated by the drive circuit in response to a feedback signal representative of an output of the synchronous flyback converter. The APEC Presentation states that "[t]he primary side side [sic] switch is turned on by demand pulses sent through the pulse transformer" and "[t]he decision to turn on the switch is made at the optimum point through a simple comparison." *See* APEC Presentation at 5. The first switch may be the "MAIN SWITCH" of the DPR Block Diagram. *See* APEC Presentation at 4.

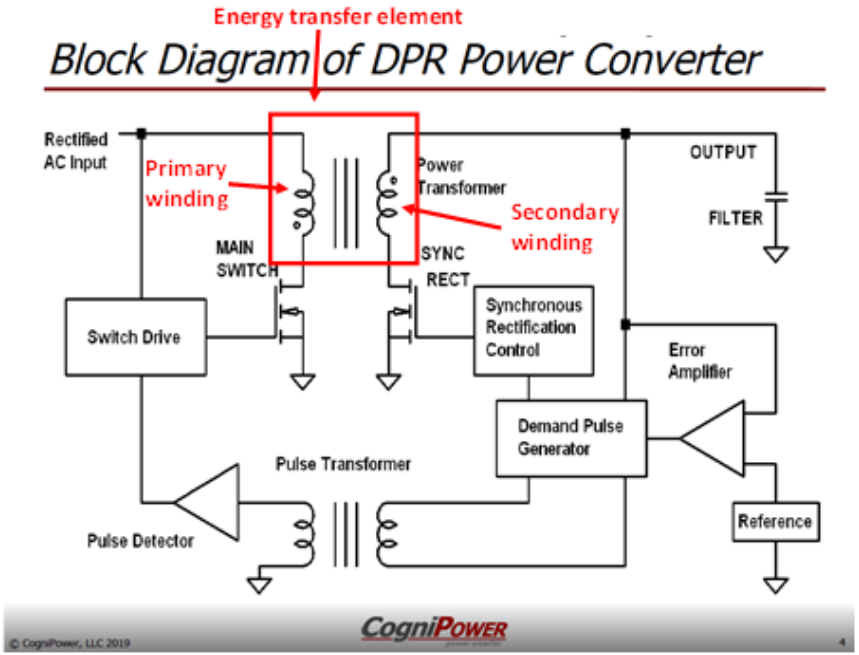
'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
of the synchronous flyback converter; and	 APEC Presentation at 4 (red annotation added). The drive signal is generated by a drive circuit in response to a feedback signal representative of the output of the synchronous flyback converter. (*See, e.g.*, APEC Presentation at slides 4-8.)
logic circuitry coupled to the drive circuit and coupled to the comparator, wherein the logic circuitry is coupled to generate a control signal to control a second switch in response to the drive signal and in response to the	The DPR Product includes logic circuitry coupled to the drive circuit and coupled to the comparator, wherein the logic circuitry is coupled to generate a control signal to control a second switch in response to the drive signal and in response to the compare signal, and wherein the second switch is to be coupled to a secondary side of the synchronous flyback converter. The recited logic circuitry may be found inside of the "Synchronous Rectification Control" block of the DPR Block Diagram, which generates a control signal to control a second switch, which by way of example only, may be the switch labelled "SYNC RECT".

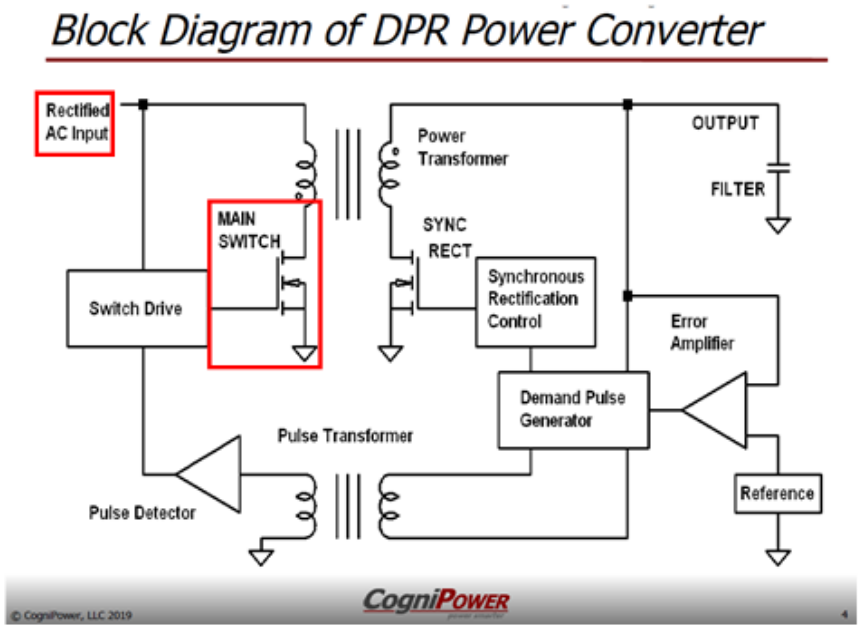
'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
compare signal, and wherein the second switch is to be coupled to a secondary side of the synchronous flyback converter.	 APEC Presentation at 4 (red annotation added). The recited drive signal is generated in response to the drive signal and the compare signal, for example as shown in the DPR Block Diagram, and as described in the APEC Presentation: "Advance notice from secondary side control for when the primary side switch is about to turn on enables simpler, more efficient synchronous rectification." (APEC Presentation at slide 16.)

'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 16 (red annotation added).
8. The secondary controller of claim 1 further comprising an oscillator coupled to generate a clock signal coupled to be received by the drive circuit, wherein the drive circuit is coupled to generate the drive signal in response to the clock signal.	*See* claim 1 above. The DPR Product includes the secondary controller of claim 1 further comprising an oscillator coupled to generate a clock signal coupled to be received by the drive circuit, wherein the drive circuit is coupled to generate the drive signal in response to the clock signal. CogniPower has taken the position that the DPR Product is an embodiment of CogniPower's patent RE47,031 (the "'031 patent"). The '031 patent discloses "an oscillator coupled to generate a clock signal coupled to be received by the drive circuit, wherein the drive circuit is coupled to generate the drive signal in response to the clock signal." *See, e.g.*, '031 patent at Fig. 4; 7:54-8:38. Based on

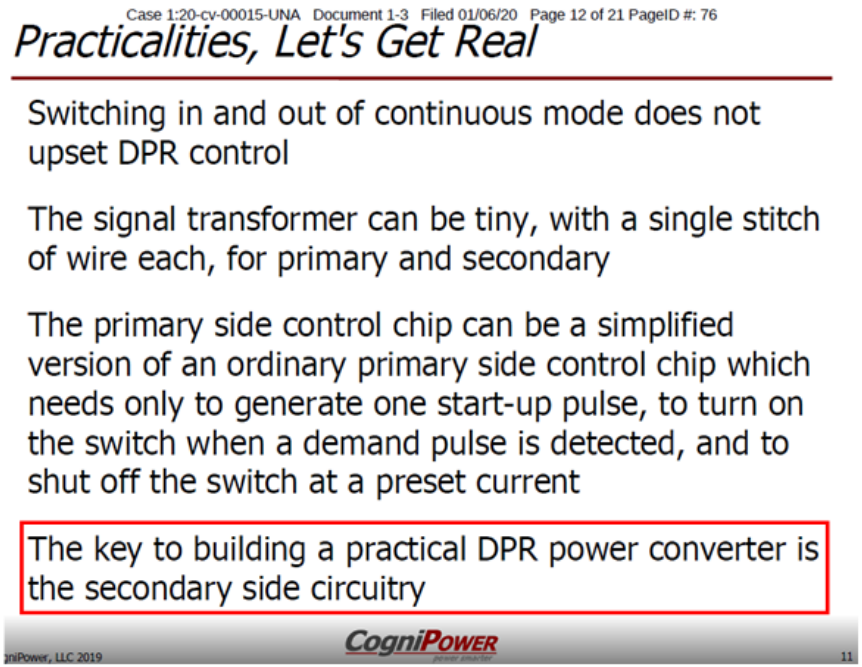
'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	Opticurrent's contention, it appears that the secondary controller of the DPR Product includes the recited oscillator.
9. A power converter, comprising:	The DPR Product includes a power converter.  APEC Presentation at 4 (red annotation added).

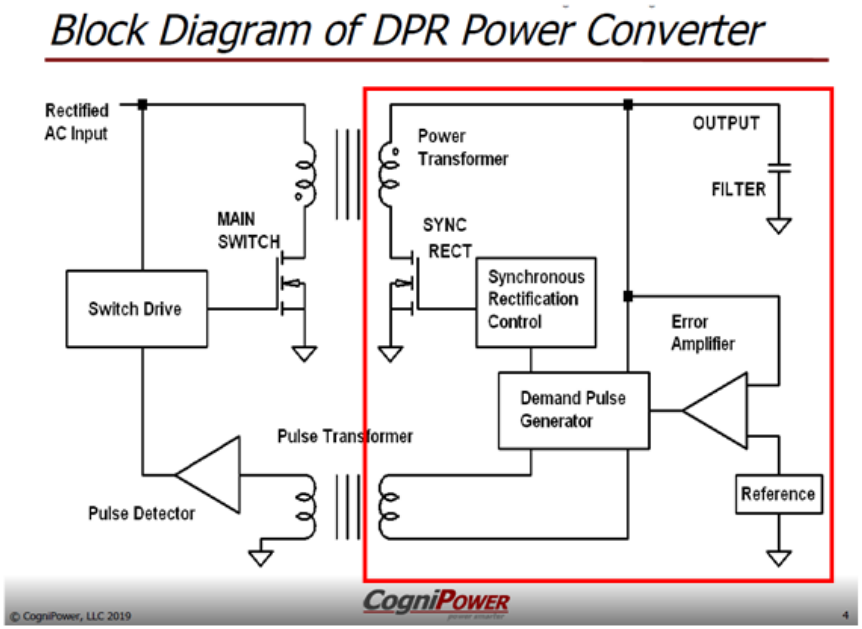
'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 3 (red annotation added).
an energy transfer element having a primary winding and a secondary winding;	The DPR Product includes an energy transfer element having a primary winding and a secondary winding.

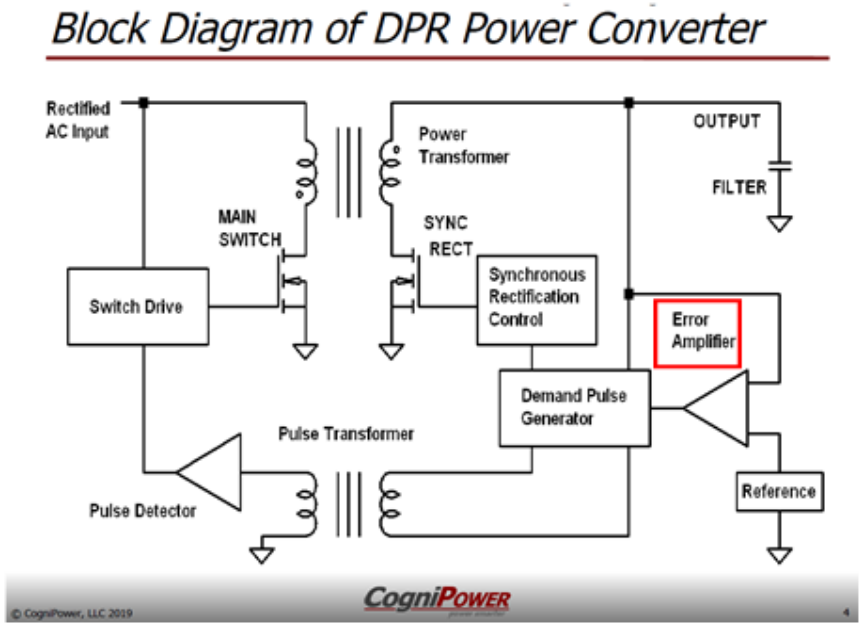
'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 4 (red annotation added).
a first switch coupled to the primary winding and coupled to an input of the power converter; and	The DPR Product includes a first switch coupled to the primary winding and coupled to an input of the power converter.

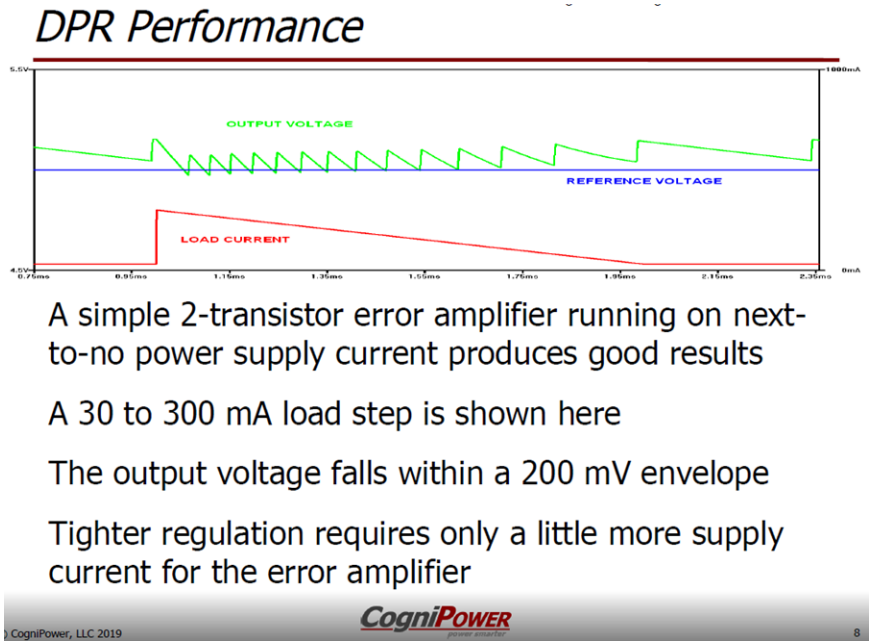
'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 4 (red annotation added).
a secondary controller coupled to control switching of the first switch to control a transfer of energy through the energy transfer element from the input of the power converter to an output of the power converter, the secondary controller including:	The DPR Product includes a secondary controller coupled to control switching of the first switch to control a transfer of energy through the energy transfer element from the input of the power converter to an output of the power converter.

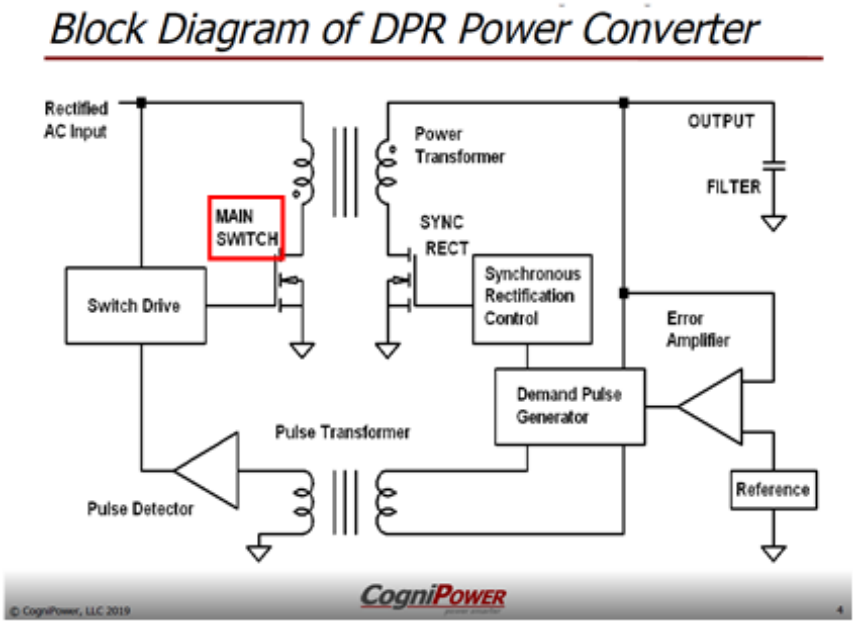
’011 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	Because the regulation intelligence resides on the secondary side, digital interfacing is straightforward Additional communication across the isolation barrier is not required when adding additional protocols There is no compensated feedback loop required for regulation so the output can be simply set to an arbitrary, digitally chosen voltage  © CogniPower, LLC 2019 CogniPower 10 APEC Presentation at 10.

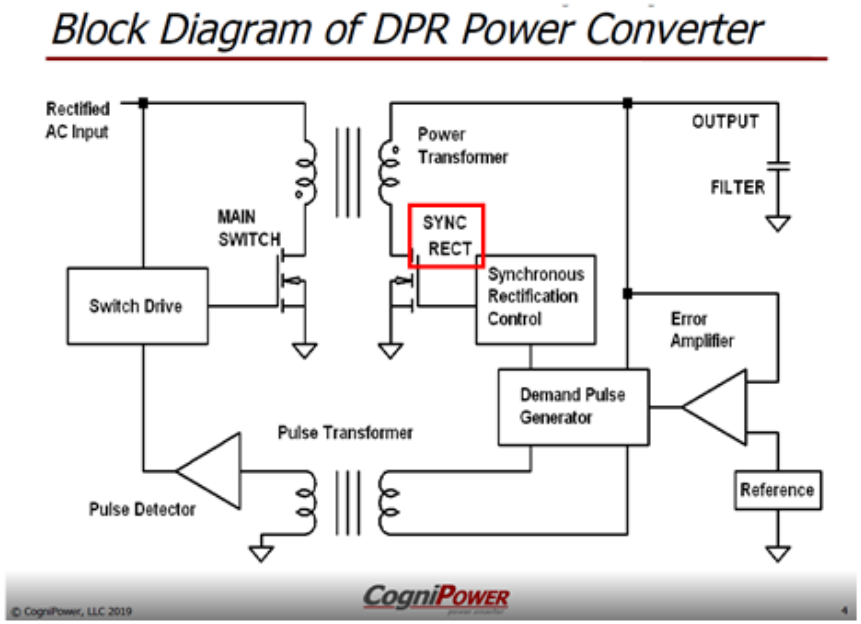
’011 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	   APEC Presentation at 11 (red annotation added).

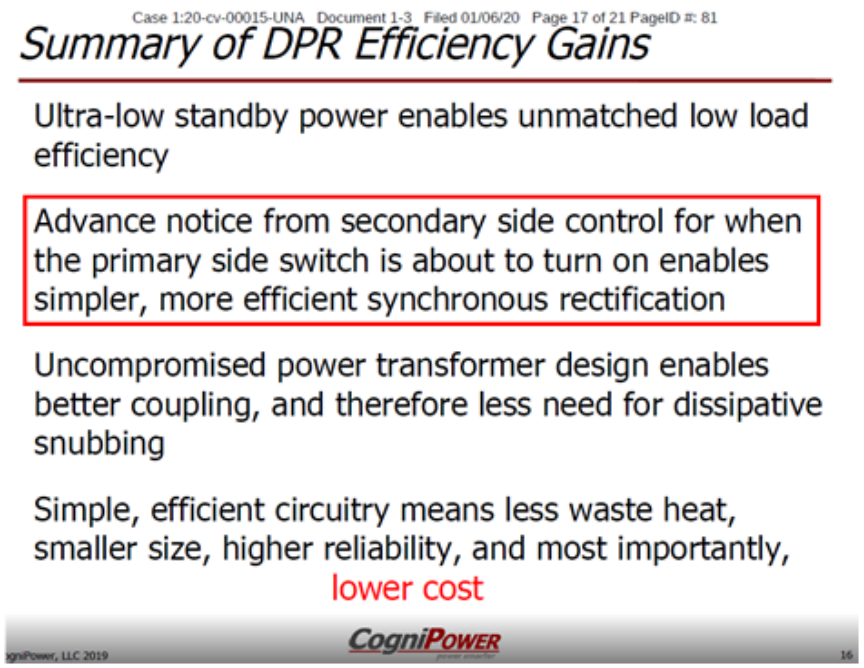
'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 4 (red annotation added).
a comparator coupled to generate a compare signal in response to a comparison of a threshold to an input signal representative of a secondary winding voltage of the secondary winding;	The DPR Product includes a comparator coupled to generate a compare signal in response to a comparison of a threshold to an input signal representative of a secondary winding voltage of the secondary winding.

'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 4 (red annotation added). The error amplifier is coupled to generate a compare signal based on the comparison of a threshold (labelled "Reference") and an input signal representative of the secondary winding voltage (shown as coupled to the secondary winding of the "Power Transformer" and input to the "Error Amplifier"), as shown in the APEC Presentation on slide 4.

'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 8.
a drive circuit coupled to generate a drive signal to control the first switch, wherein the drive signal is coupled to be generated by the drive circuit in response to a feedback signal representative of the output of the power converter; and	The DPR Product includes a drive circuit coupled to generate a drive signal to control the first switch, wherein the drive signal is coupled to be generated by the drive circuit in response to a feedback signal representative of the output of the power converter. The APEC Presentation states that "[t]he primary side side [sic] switch is turned on by demand pulses sent through the pulse transformer" and "[t]he decision to turn on the switch is made at the optimum point through a simple comparison." *See* APEC Presentation at 5. The first switch may be the "MAIN SWITCH" of the DPR Block Diagram. *See* APEC Presentation at 4.

'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 4 (red annotation added). The drive signal is generated by a drive circuit in response to a feedback signal representative of the output of the synchronous flyback converter. (*See, e.g.*, APEC Presentation at slides 4-8.)
logic circuitry coupled to the drive circuit and coupled to the comparator, wherein the logic circuitry is coupled to generate a control signal to control a second switch in response to the drive	The DPR Product includes logic circuitry coupled to the drive circuit and coupled to the comparator, wherein the logic circuitry is coupled to generate a control signal to control a second switch in response to the drive signal and in response to the compare signal, and wherein the second switch is coupled to a secondary side of the power converter.

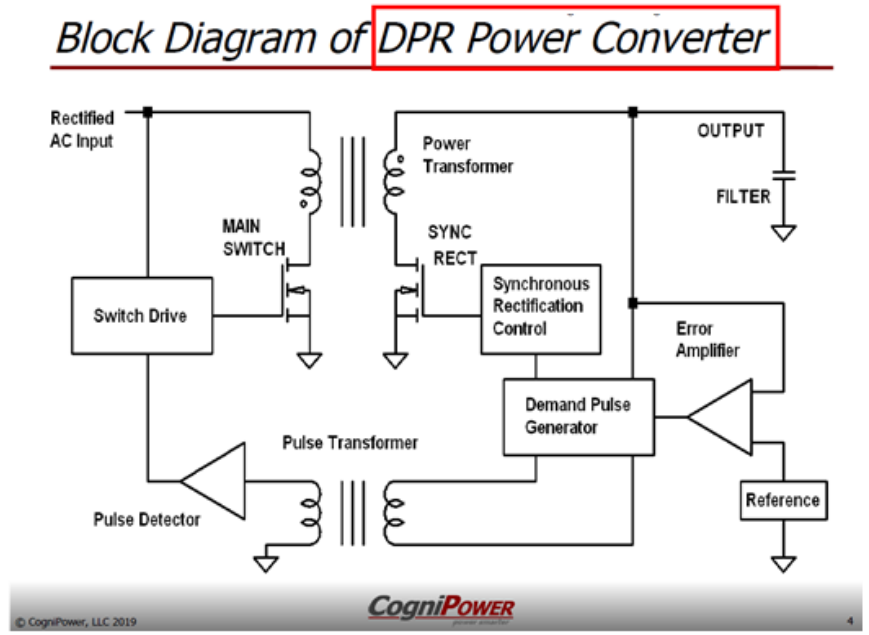
'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
signal and in response to the compare signal, and wherein the second switch is coupled to a secondary side of the power converter.	The recited logic circuitry may be found inside of the "Synchronous Rectification Control" block of the DPR Block Diagram, which generates a control signal to control a second switch, which by way of example only, may be the switch labelled "SYNC RECT".  APEC Presentation at 4 (red annotation added). The recited drive signal is generated in response to the drive signal and to the compare signal, for example as shown in the DPR Block Diagram, and as described in the APEC Presentation: "Advance notice from secondary side control for when the primary side switch is about to turn on enables simpler, more efficient synchronous rectification." (APEC Presentation at slide 16.)

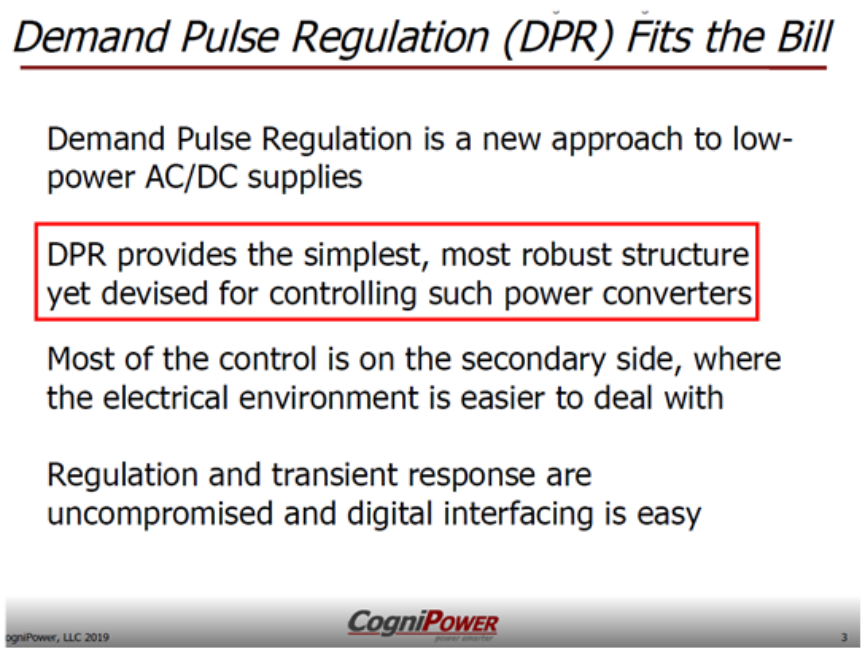
'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 16 (red annotation added).
17. The power converter of claim 9 wherein the secondary controller further comprises an oscillator coupled to generate a clock signal coupled to be received by the drive circuit, wherein the drive circuit is coupled to	*See* claim 9 above. The DPR Product includes the power converter of claim 9 wherein the secondary controller further comprises an oscillator coupled to generate a clock signal coupled to be received by the drive circuit, wherein the drive circuit is coupled to generate the drive signal in response to the clock signal. CogniPower has taken the position that the DPR Product is an embodiment of CogniPower's '031 patent. The '031 patent discloses "an oscillator coupled to generate a clock signal coupled to be received by the drive circuit, wherein the drive circuit is coupled to generate the drive signal in

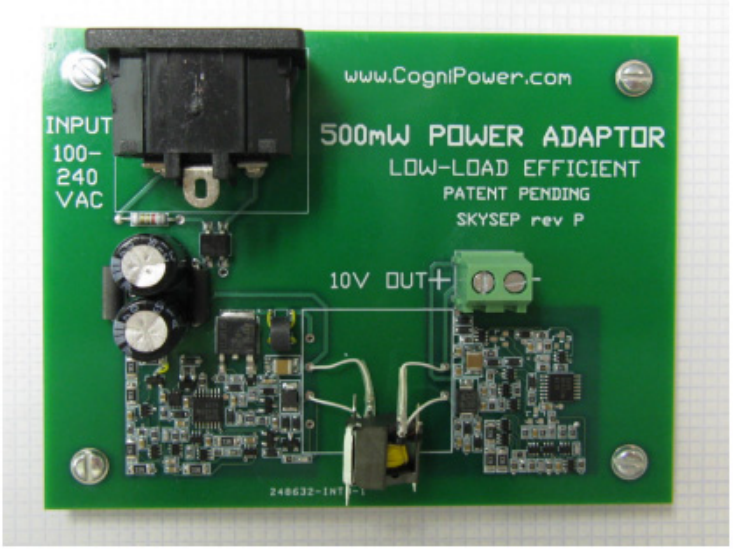
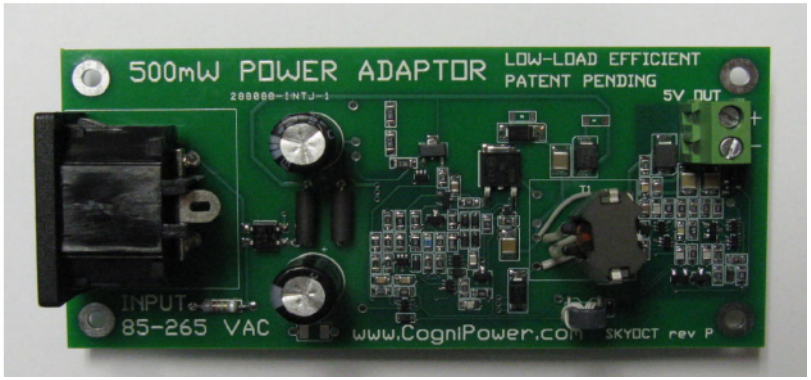
'011 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
generate the drive signal in response to the clock signal.	response to the clock signal." *See, e.g.*, '031 patent at Fig. 4; 7:54-8:38. Based on Opticurrent's contention, it appears that the secondary controller of the DPR Product includes the recited oscillator.

Exhibit B

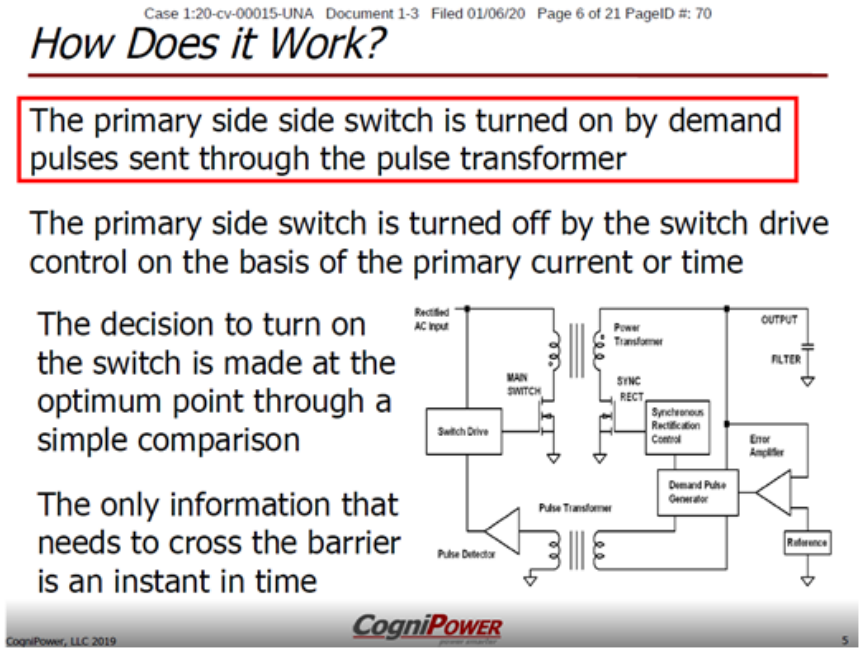
Initial Claim Chart for U.S. Patent No. 9,166,486 ("the '486 Patent")
(Claim 1)

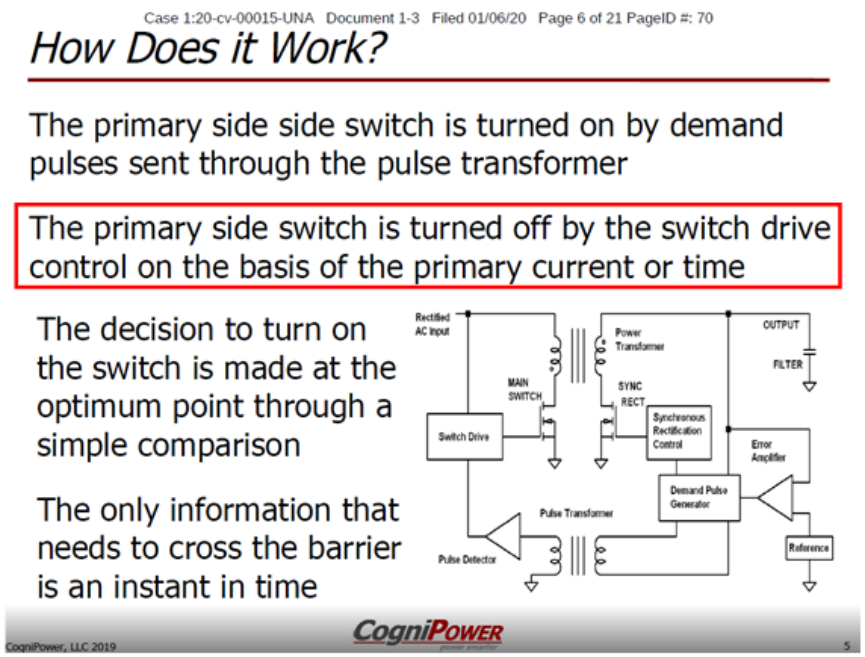
'486 Patent Claim	**CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")**
1. A power converter controller comprising:	The DPR Product includes a power converter controller.  APEC Presentation at 4 (red annotation added).

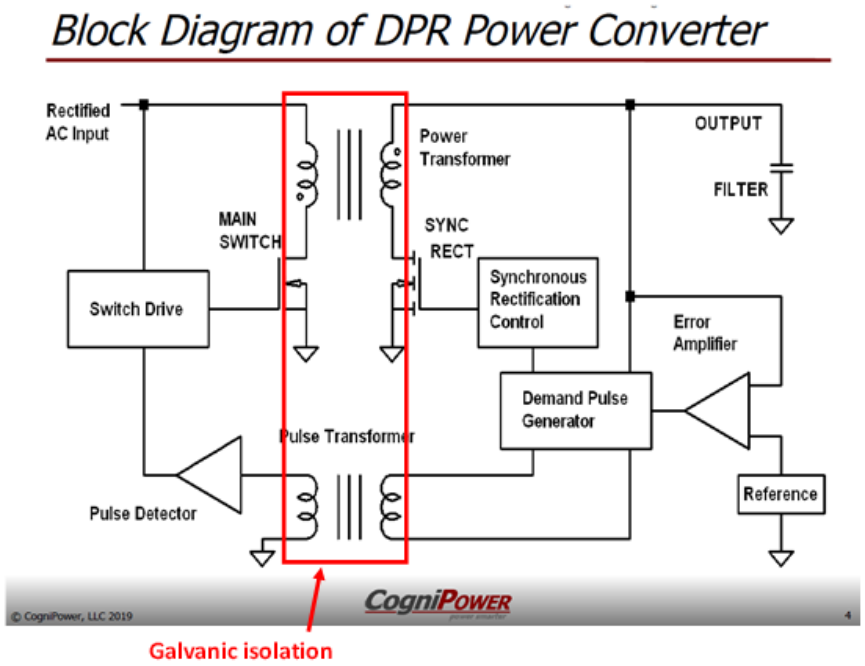
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 3 (red annotation added). In addition, the power converter controller is embodied in the physical products shown in the APEC Presentation.

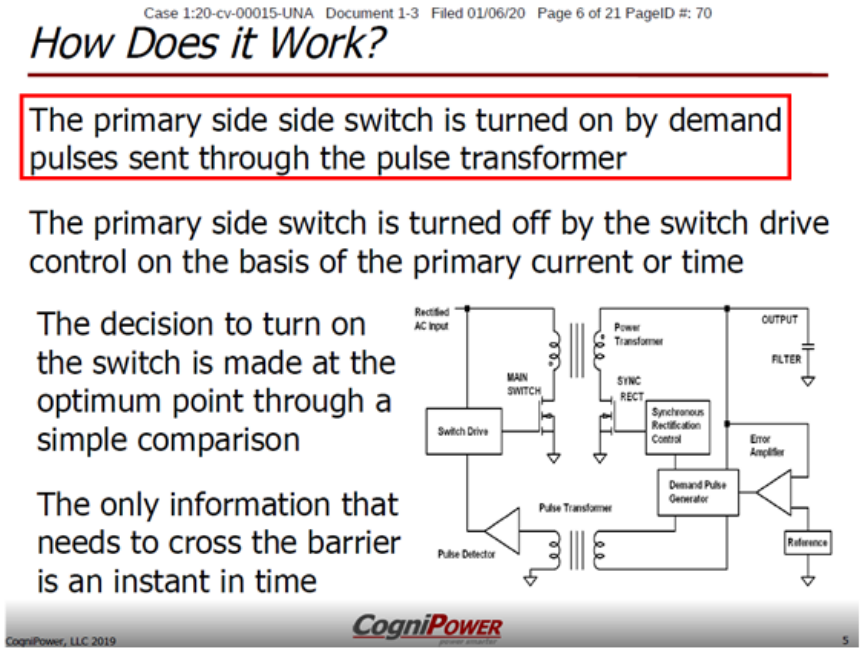
'486 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 Early **DPR Prototype** APEC Presentation at 20.  APEC Presentation at 10.

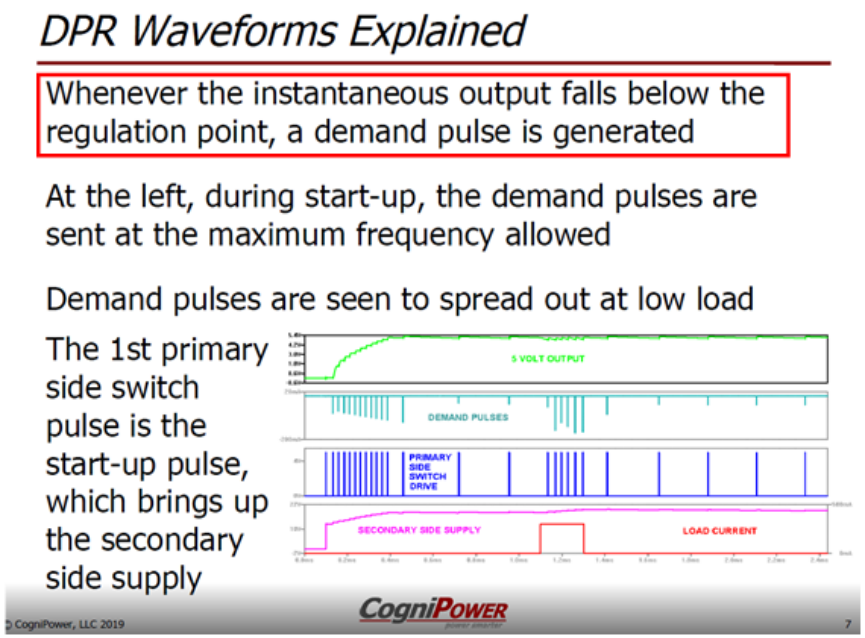
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
a primary controller to be coupled to a power switch of a power converter, wherein the primary controller is coupled to receive one or more request signals and transition the power switch from an OFF state to an ON state in response to each of the one or more received request signals, and wherein the primary controller is coupled to detect a turn-off condition when the power switch is in the ON state and transition the power switch from the ON state to the OFF state in response to detection of the turn-off condition; and	The DPR Product includes a primary controller to be coupled to a power switch of a power converter, wherein the primary controller is coupled to receive one or more request signals and transition the power switch from an OFF state to an ON state in response to each of the one or more received request signals, and wherein the primary controller is coupled to detect a turn-off condition when the power switch is in the ON state and transition the power switch from the ON state to the OFF state in response to detection of the turn-off condition. The “one or more request signals” are analogous to the DPR Product’s “Demand pulses,” shown below in slide 5 of the APEC Presentation. The DPR Product includes circuitry wherein the primary controller is coupled to receive one or more request signals and transition the power switch from an OFF state to an ON state in response to each of the one or more received request signals. For example, according to the APEC Presentation, “[t]he primary side side (sic) switch is turned on by demand pulses sent through the pulse transformer.”

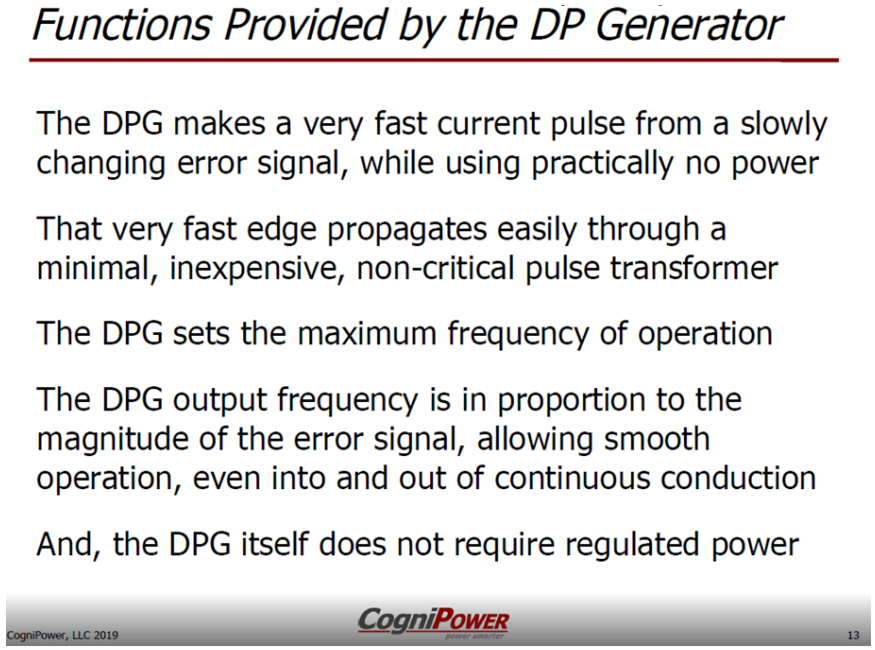
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 5 (red annotation added). Further, the DPR Product includes circuitry “wherein the primary controller is coupled to detect a turn-off condition when the power switch is in the ON state and transition the power switch from the ON state to the OFF state in response to detection of the turn-off condition.”

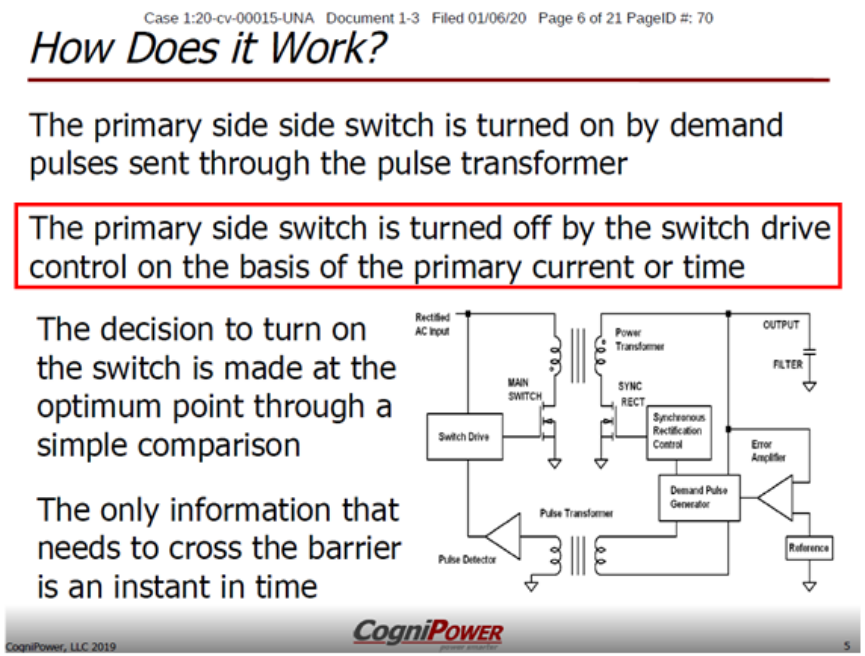
'486 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 5 (red annotation added).
a secondary controller galvanically isolated from the primary controller, wherein the secondary controller is coupled to transmit the one or more request signals to the primary controller, and wherein the secondary controller is coupled to control an amount of time between the transmission of each of the request signals,	The DPR Product includes a secondary controller galvanically isolated from the primary controller, wherein the secondary controller is coupled to transmit the one or more request signals to the primary controller, and wherein the secondary controller is coupled to control an amount of time between the transmission of each of the request signals. The secondary controller is galvanically isolated from the primary controller.

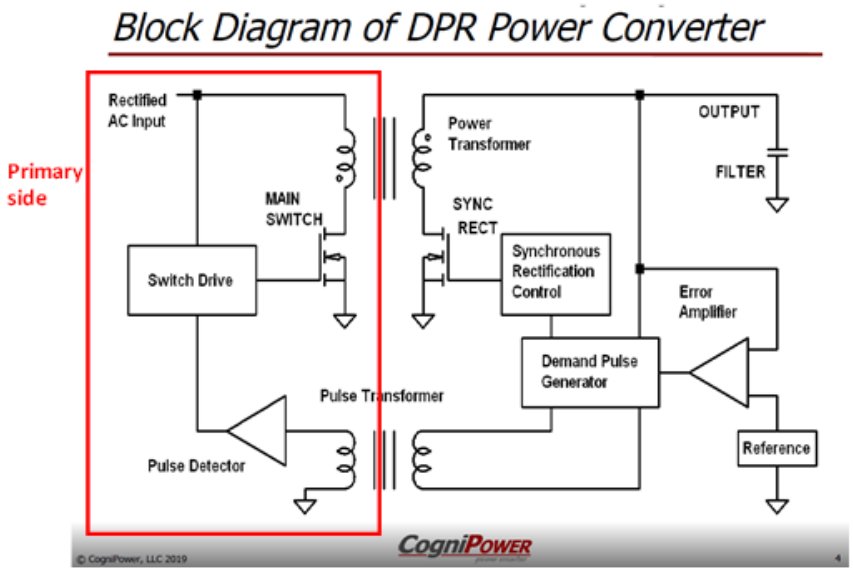
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 4 (red annotation added). The secondary controller is coupled to transmit the one or more request signals to the primary controller:

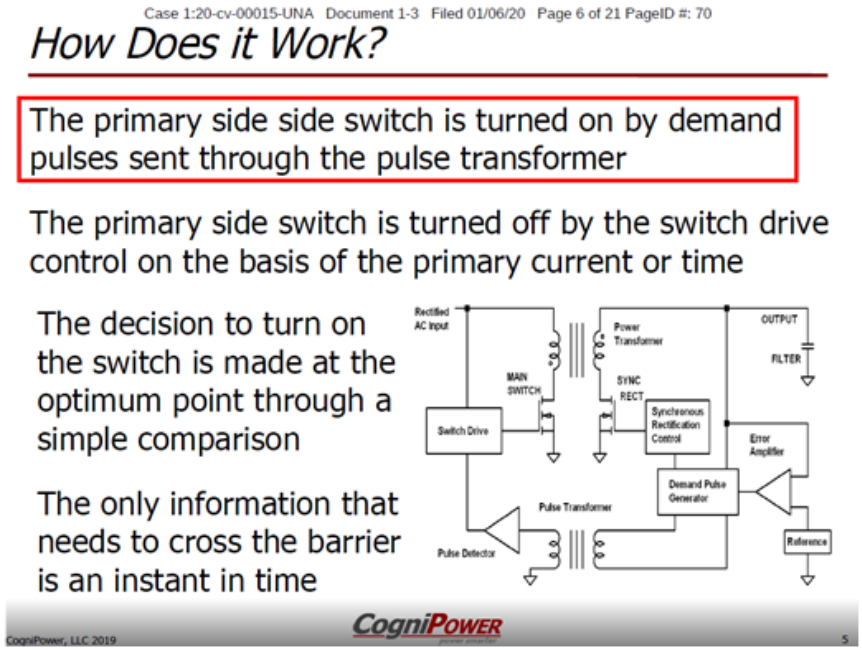
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 5 (red annotation added). The secondary controller of the DPR product is coupled to control an amount of time between the transmission of each of the request signals: “Whenever the instantaneous output falls below the regulation point, a demand pulse is generated.”

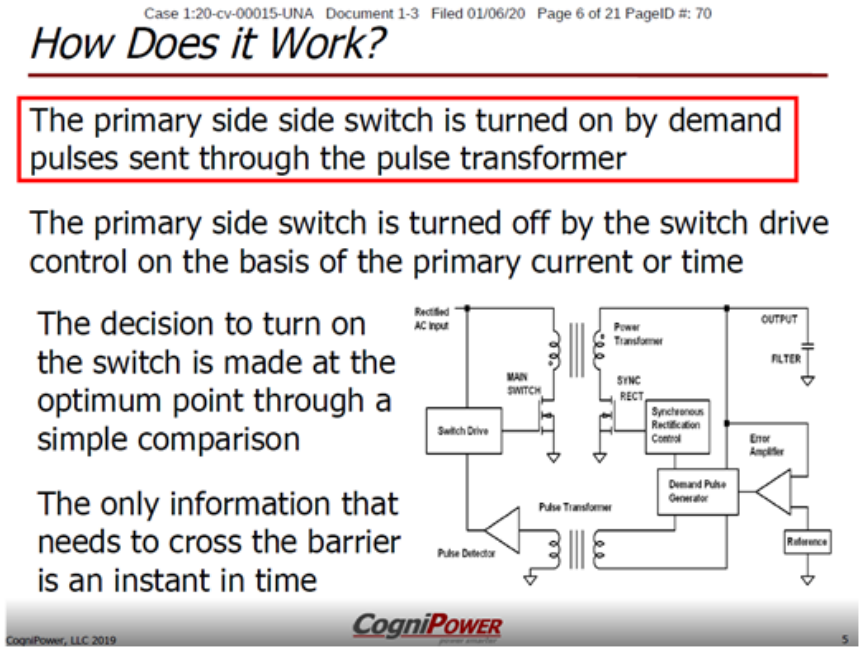
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 7 (red annotation added).

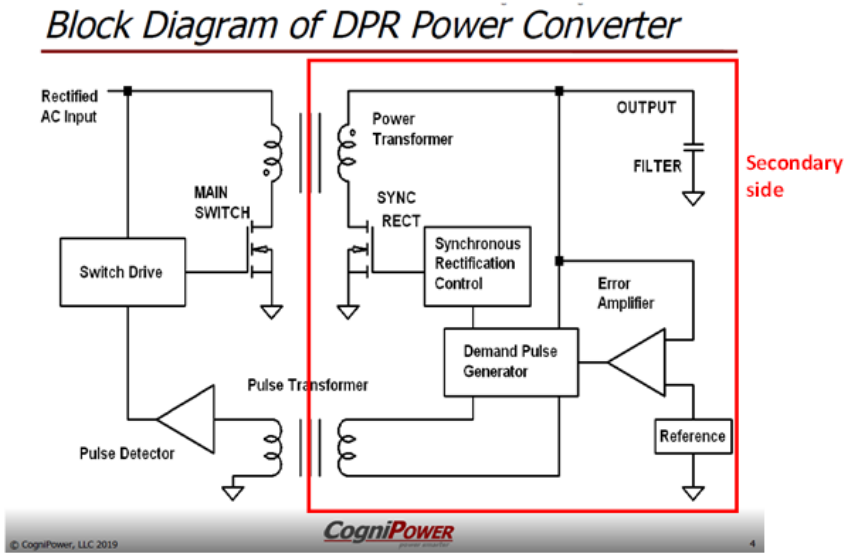
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 13.
wherein the turn-off condition is a threshold current limit and the primary controller is coupled to adjust the threshold current limit in response to an amount of time the power switch is in the ON state.	The DPR Product includes wherein the turn-off condition is a threshold current limit and the primary controller is coupled to adjust the threshold current limit in response to an amount of time the power switch is in the ON state. The recited “turn-off condition” may be based on the primary side switch current or time: “The primary side switch is turned off by the switch drive control on the basis of the primary current or time.” (APEC Presentation at slide 5.)

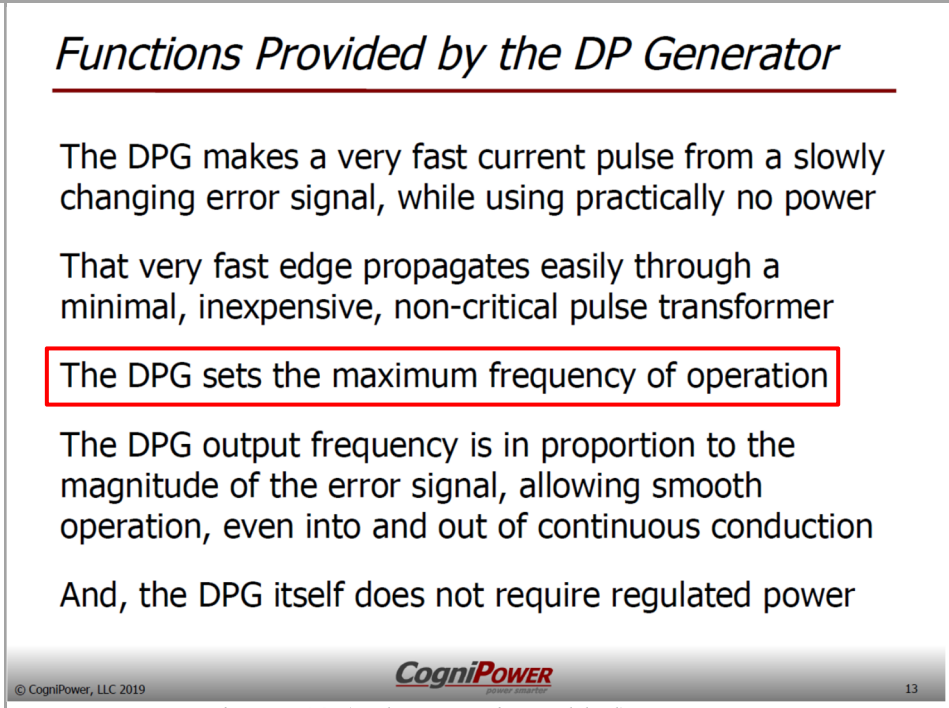
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 5 (red annotation added); *see also* APEC Presentation at 11.
2. The power converter controller of claim 1, wherein the primary controller is configured to be coupled to a primary side of the power converter, wherein the primary controller is coupled to receive the one or more request signals from a secondary side of the power converter, and wherein the secondary controller is configured to	*See* claim 1 above. The DPR Product includes the power converter controller of claim 1, wherein the primary controller is configured to be coupled to a primary side of the power converter, wherein the primary controller is coupled to receive the one or more request signals from a secondary side of the power converter, and wherein the secondary controller is configured to be coupled to the secondary side of the power converter.

’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
be coupled to the secondary side of the power converter.	The recited primary controller is configured to be coupled to the primary side of the power converter.  APEC Presentation at 4 (red annotation added).

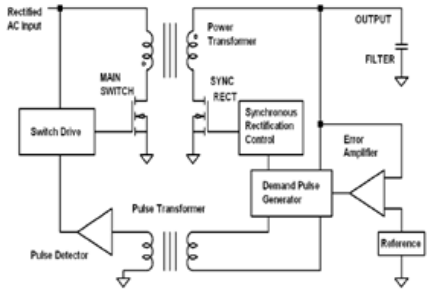
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 5 (red annotation added). The primary controller is coupled to receive the one or more request signals from a secondary side of the power converter.

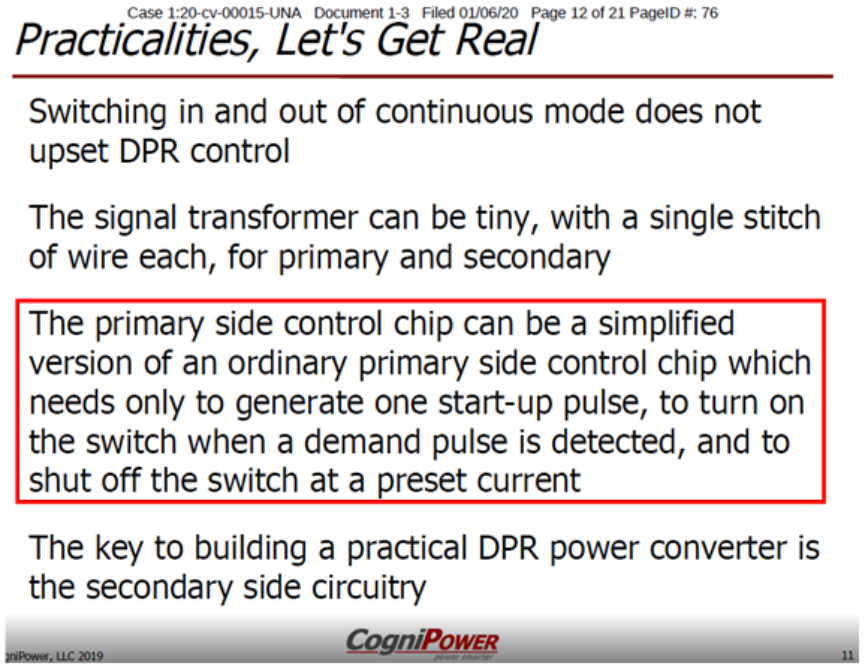
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 5 (red annotation added). The secondary controller is configured to be coupled to the secondary side of the power converter.

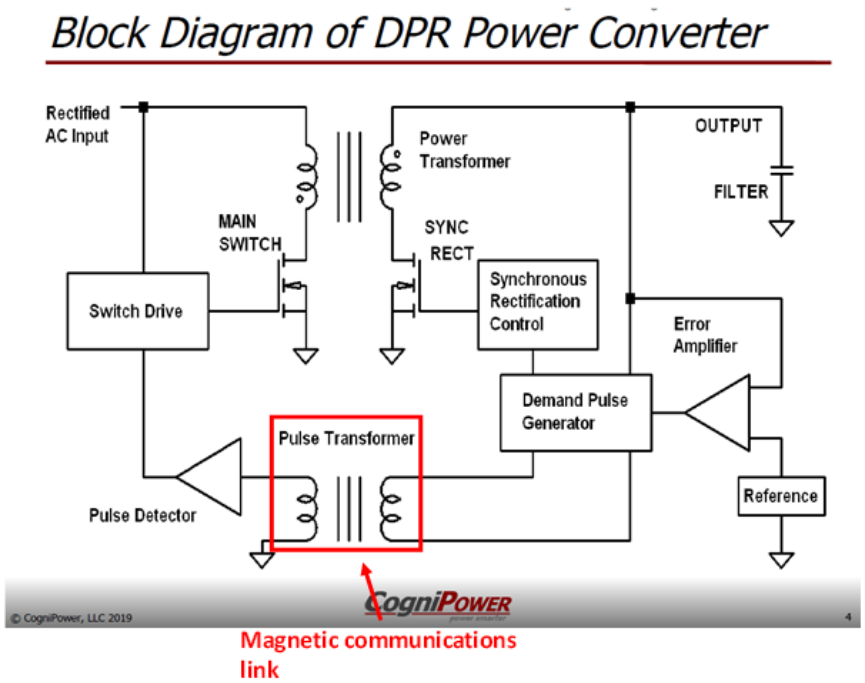
'486 Patent Claim	**CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")**
	 APEC Presentation at 5 (red annotation added).
3. The power converter controller of claim 1, wherein the secondary controller includes a timing circuit that sets a minimum amount of time between the transmission of each of the one or more request signals.	*See* claim 1 above. The DPR Product includes the power converter controller of claim 1, wherein the secondary controller includes a timing circuit that sets a minimum amount of time between the transmission of each of the one or more request signals. The maximum frequency of the demand pulses sets a minimum time between transmission of request signals.

'486 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 13 (red annotation added). CogniPower has taken the position that the DPR Product is an embodiment of CogniPower's patent RE47,031 (the "'031 patent"). Based on CogniPower's contention, the recited timing circuit is also shown in the '031 patent, which recites, for example, an "output-side blocking oscillator 503b." (*See, e.g.*, '031 patent at 5:23-30). The timing circuit includes an oscillator that sets a minimum amount of time between the transmission of each of the one or more request signals. *See, e.g.*, '031 patent at 5:13-60; 7:38-46.

'486 Patent Claim	**CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")**
5. The power converter controller of claim 1, wherein the primary controller is coupled to: detect an amount of current through the power switch while the power switch is in the ON state; determine when the amount of current through the power switch is greater than the threshold current limit; and transition the power switch from the ON state to the OFF state when the amount of current through the power switch is greater than the threshold current limit.	*See* claim 1 above. The DPR Product includes the power converter controller of claim 1, wherein the primary controller is coupled to: detect an amount of current through the power switch while the power switch is in the ON state; determine when the amount of current through the power switch is greater than the threshold current limit; and transition the power switch from the ON state to the OFF state when the amount of current through the power switch is greater than the threshold current limit. The primary controller transitions the power switch from an ON to OFF state using the current in the primary power switch.

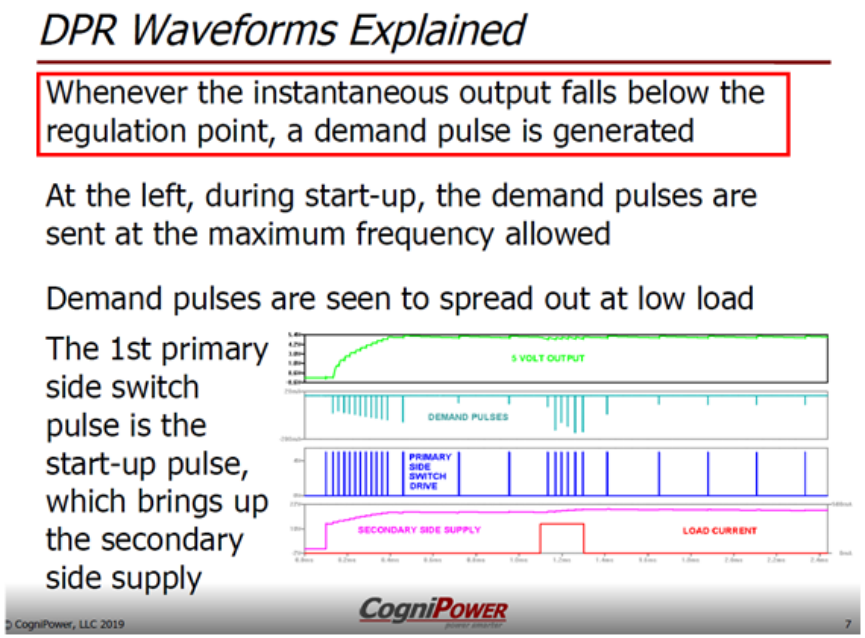
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 How Does it Work? The primary side side switch is turned on by demand pulses sent through the pulse transformer The primary side switch is turned off by the switch drive control on the basis of the primary current or time The decision to turn on the switch is made at the optimum point through a simple comparison The only information that needs to cross the barrier is an instant in time  APEC Presentation at 5 (red annotation added). The power converter controller uses a preset current as a threshold current limit to determine when to turn off the power converter controller.

’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 11 (red annotation added). *See, also*, ’031 Patent at 7:15-22.
6. The power converter controller of claim 1, wherein the secondary controller is coupled to transmit the request signals via a communication link, wherein the primary controller is coupled to receive the request signals via the communication link, and wherein the communication link includes at least one of an optical communication link, a capacitive	*See* claim 1 above. The DPR Product includes the power converter controller of claim 1, wherein the secondary controller is coupled to transmit the request signals via a communication link, wherein the primary controller is coupled to receive the request signals via the communication link, and wherein the communication link includes at least one of an optical communication link, a capacitive communication link, and a magnetic communication link.

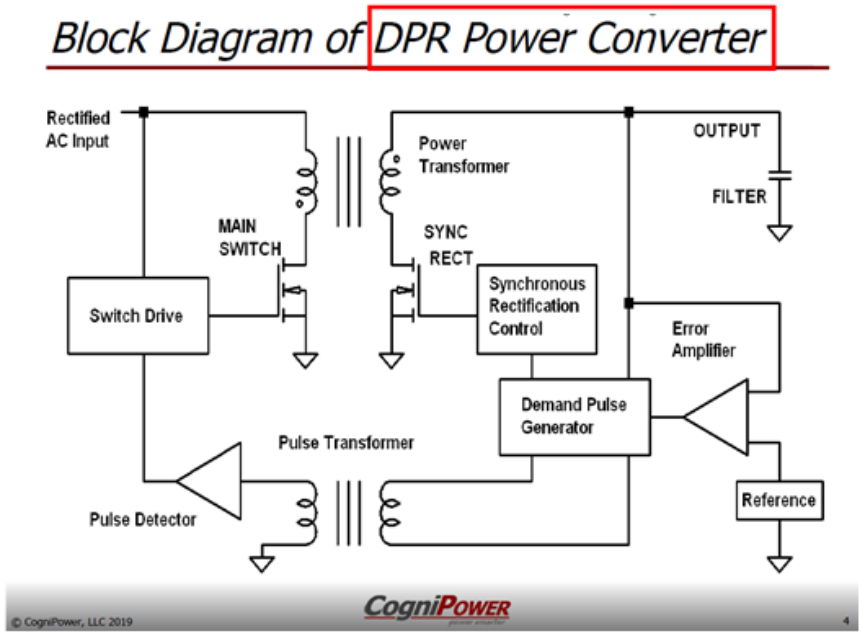
'486 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
communication link, and a magnetic communication link.	The communication link between the secondary and primary controllers is a magnetic communications link (*i.e.* a pulse transformer), as shown in the APEC Presentation slide 5.  APEC Presentation at 4 (red annotation added).
7. The power converter controller of claim 3, wherein the minimum amount of time between the transmission of each of the one or more request signals sets a minimum	*See* claim 3 above. The DPR Product includes the power converter controller of claim 3, wherein the minimum amount of time between the transmission of each of the one or more

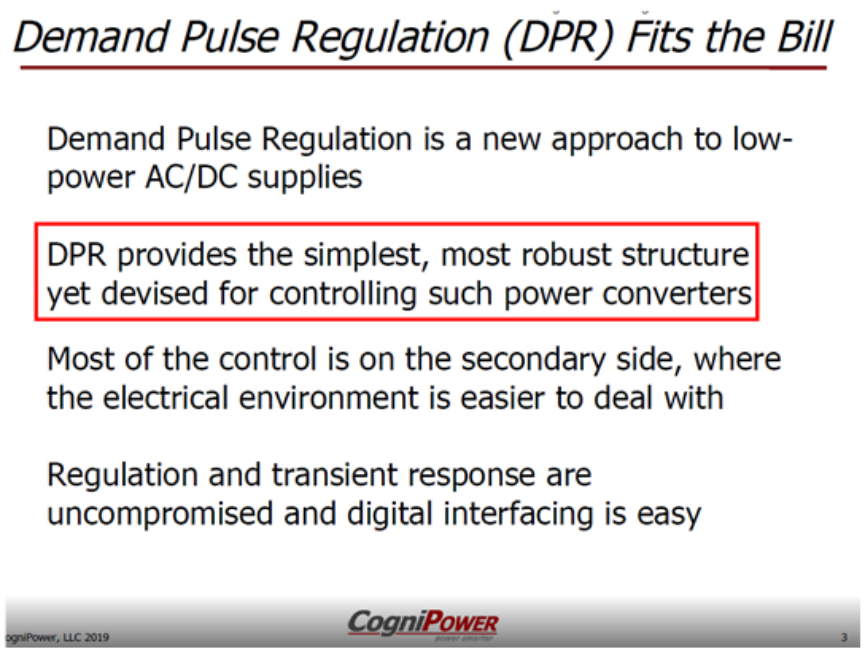
'486 Patent Claim	**CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")**
amount of time between two consecutive transitions of the power switch from the OFF state to the ON state.	request signals sets a minimum amount of time between two consecutive transitions of the power switch from the OFF state to the ON state. A minimum amount of time between demand pulses translates into a maximum switching frequency, which is controlled by the demand pulse generator. *See, e.g.*, APEC Presentation at 13; *see also* APEC Presentation at 5-7. The '031 patent also describes an oscillator integrated into a secondary side controller that has a higher frequency than the frequency of the primary controller. *See, e.g.*, '031 patent at 6:59-63; 7:54-59. Because the secondary controller can generate demand pulses at a higher frequency, the minimum time between request signals sets the minimum time between when the primary switch can turn on in consecutive cycles.
8. The power converter controller of claim 3, wherein the timing circuit is coupled to operate in a first state until triggered to operate in a second state, wherein the timing circuit is in the second state for a holding period and transitions back to the first state at an end of the holding period, and wherein the holding period sets the minimum amount of time between the transmission of two consecutive request signals.	*See* claim 3 above. The DPR Product includes the power converter controller of claim 3, wherein the timing circuit is coupled to operate in a first state until triggered to operate in a second state, wherein the timing circuit is in the second state for a holding period and transitions back to the first state at an end of the holding period, and wherein the holding period sets the minimum amount of time between the transmission of two consecutive request signals. As described in the '031 patent, the secondary controller timer circuit includes an oscillator, which operates in a first state (*e.g.* logic 1) and then is triggered to operate in a second state (*e.g.* logic 0) and remains in the second state for a holding period and transitions back to the first state at the end of the holding period. The logic 0 state/holding period sets the minimum time between request signals because no demand pulse can be sent to the primary when the oscillator is in its logic 0 state). *See, e.g.*, '031 patent at 7:62-8:24.

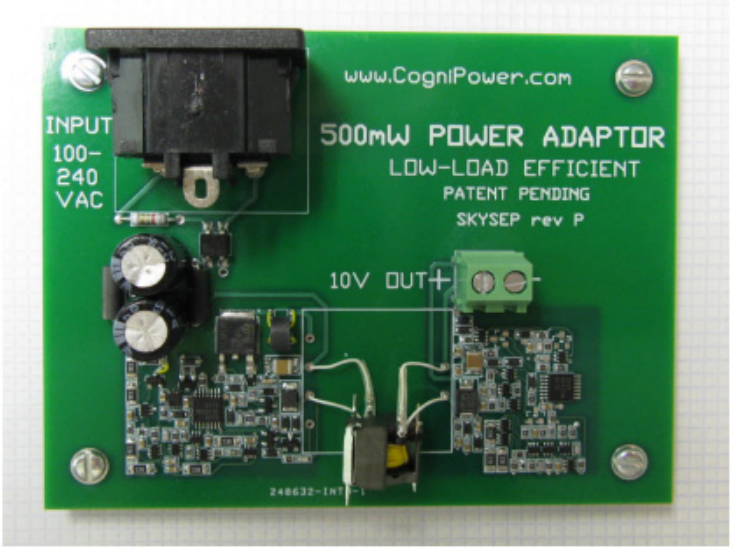
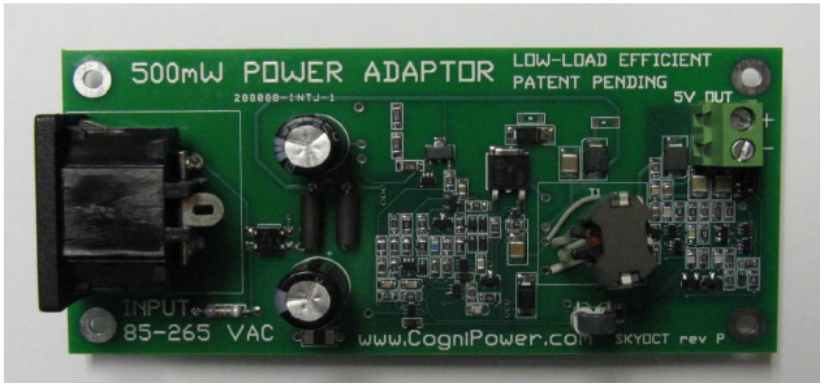
'486 Patent Claim	**CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")**
9. The power converter controller of claim 8, wherein the secondary controller includes a secondary switch control circuit coupled to sense an output quantity of the power converter and transmit one of the request signals to the primary controller when the a sensed output quantity is less than a desired output quantity and the timing circuit is in the first state, wherein the secondary switch control circuit triggers the timing circuit in response to transmitting the request signal.	*See* claim 8 above. The DPR Product includes the power converter controller of claim 8, wherein the secondary controller includes a secondary switch control circuit coupled to sense an output quantity of the power converter and transmit one of the request signals to the primary controller when the a sensed output quantity is less than a desired output quantity and the timing circuit is in the first state, wherein the secondary switch control circuit triggers the timing circuit in response to transmitting the request signal. The secondary controller of the DPR Product is coupled to sense an output quantity of the power converter and transmit one of the request signals to the primary controller when the a sensed output quantity is less than a desired output quantity and the timing circuit is in the first state: "Whenever the instantaneous output falls below the regulation point, a demand pulse is generated."

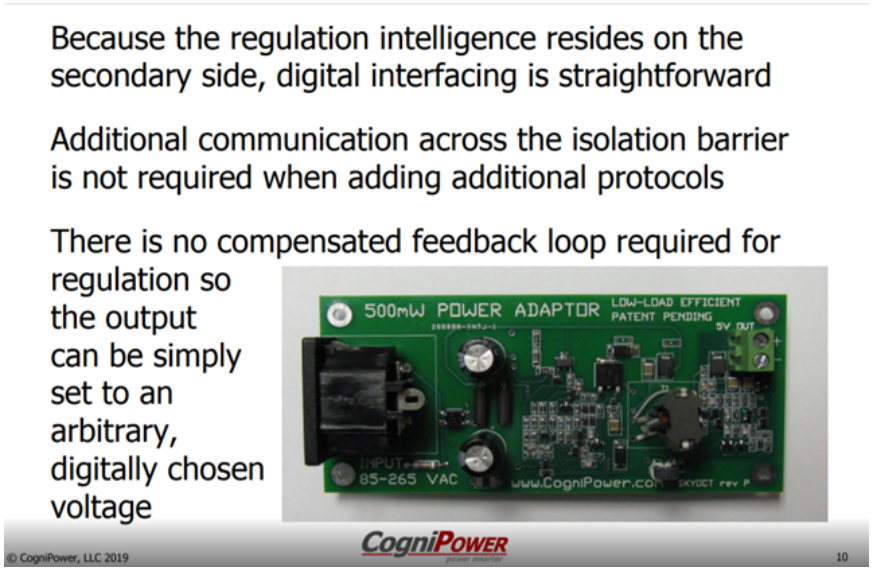
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 7 (red annotation added). The secondary switch control circuit of the DPR Product triggers the timing circuit in response to transmitting the request signal: “the regulation intelligence resides on the secondary side.”

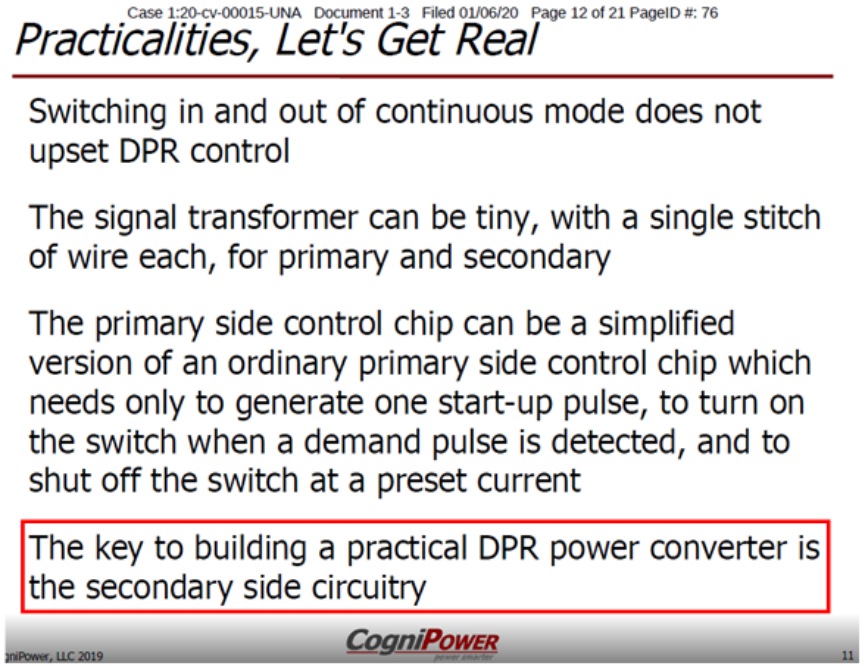
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 Digital Interfacing Because the regulation intelligence resides on the secondary side, digital interfacing is straightforward Additional communication across the isolation barrier is not required when adding additional protocols There is no compensated feedback loop required for regulation so the output can be simply set to an arbitrary, digitally chosen voltage  APEC Presentation at 10 (red annotation added). The ’031 patent also describes secondary switch control circuit that generates the request signals in response to the sensed output quantity and triggers the timing circuit in response to transmitting the request signal. *See, e.g.*, ’031 patent at 8:4-38. The secondary switch control inhibits demand pulses/request signals when the output is above a reference and generates the request signals when the output is less than the reference.

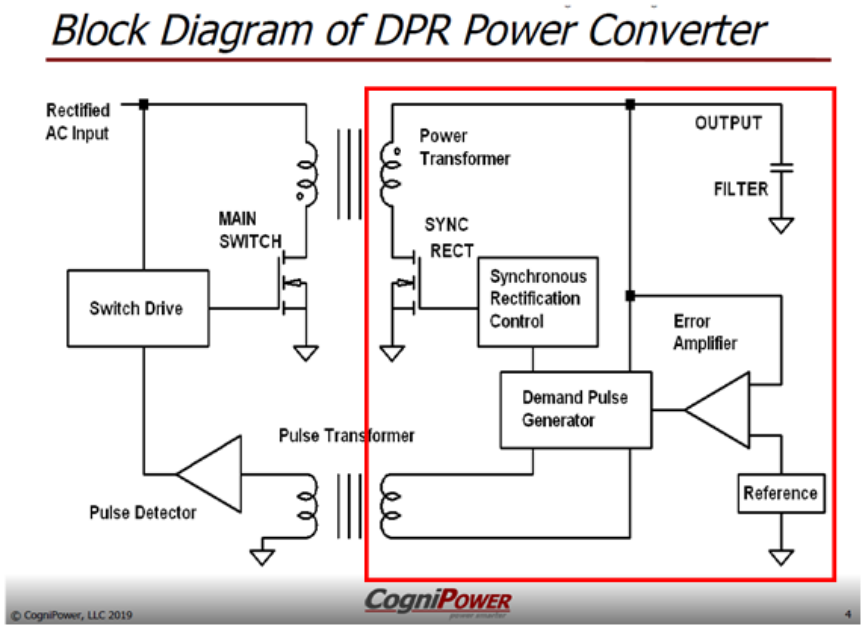
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
11. A power converter controller comprising:	The DPR Product includes a power converter controller.  APEC Presentation at 4 (red annotation added).

’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 3 (red annotation added). In addition, the power converter controller is embodied in the physical products shown in the APEC Presentation.

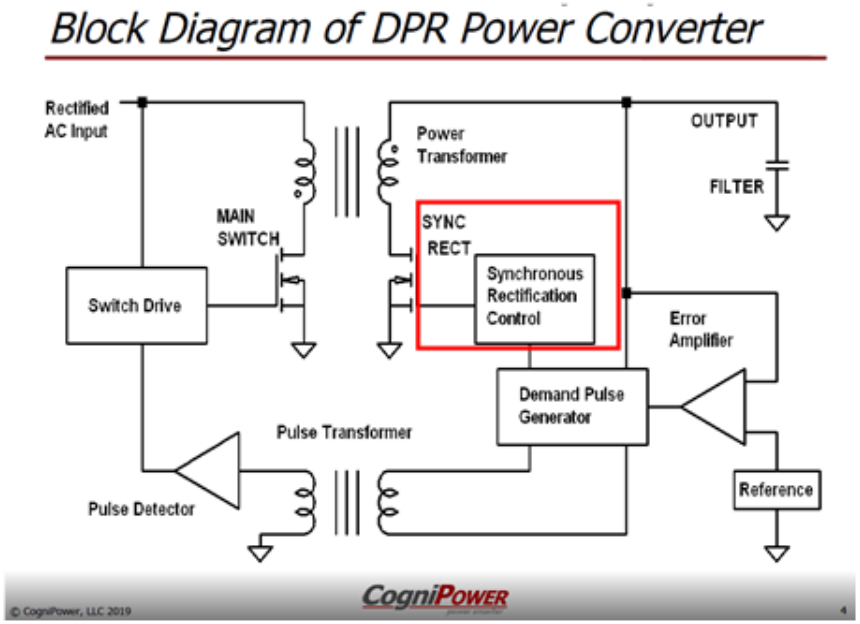
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 Early **DPR Prototype** APEC Presentation at 20.  APEC Presentation at 10.

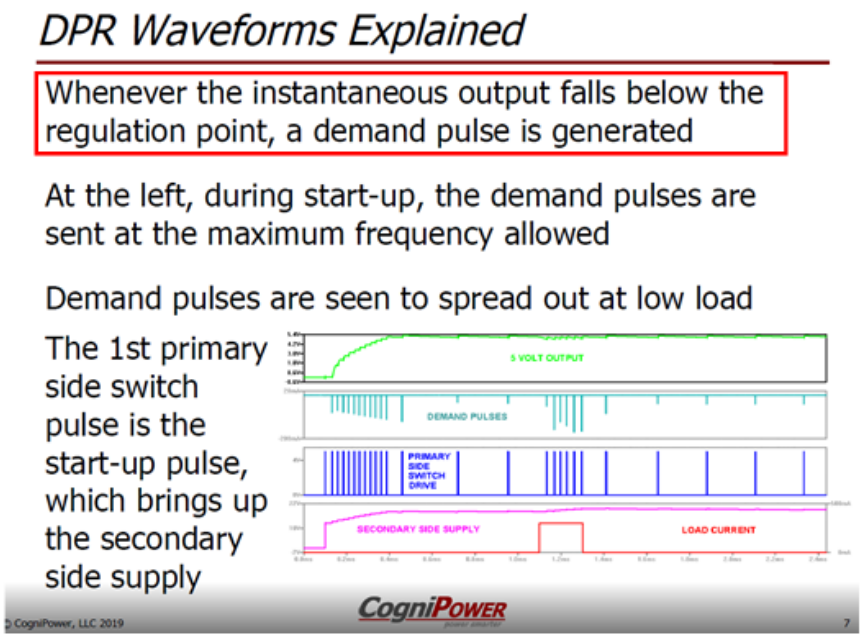
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
a secondary controller comprising:	The DPR Product includes a secondary controller.  APEC Presentation at 10.

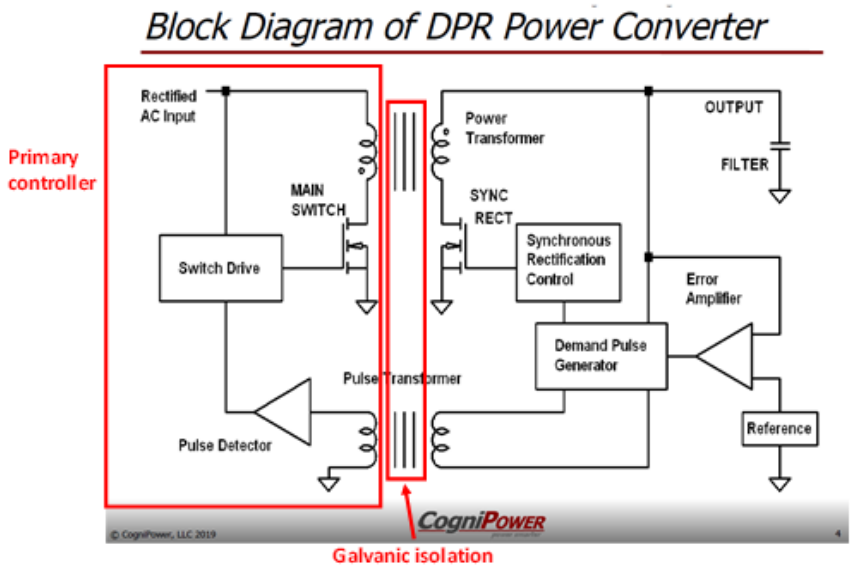
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 11 (red annotation added).

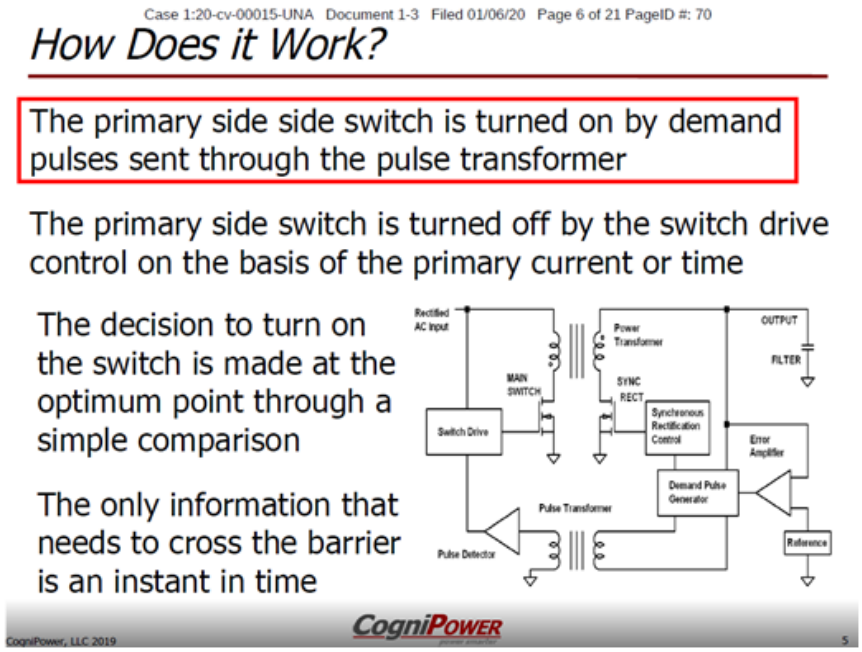
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 4 (red annotation added).
a timing circuit coupled to operate in a first state until triggered to operate in a second state, wherein the timing circuit is in the second state for a holding period and transitions back to the first state at an end of the holding period; and	The DPR Product includes a timing circuit coupled to operate in a first state until triggered to operate in a second state, wherein the timing circuit is in the second state for a holding period and transitions back to the first state at an end of the holding period. CogniPower has taken the position that the DPR Product is an embodiment of CogniPower’s patent RE47,031 (the “’031 patent”). Based on CogniPower’s contention, the recited timing circuit is also shown in the ’031 patent, which recites, for example, an “output-side blocking oscillator 503b.” (*See, e.g.*, ’031 patent at 5:23-30). The timing circuit includes an oscillator that operates in a first state (*e.g.* logic 1) and then is triggered to operate in a second state (*e.g.* logic 0) and remains in the

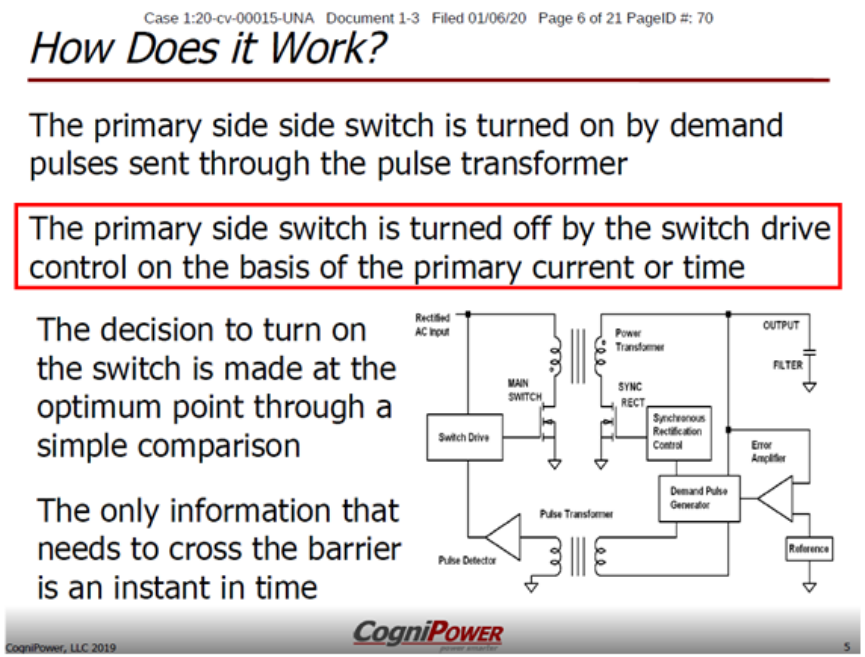
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	second state for a holding period and transitions back to the first state at the end of the holding period. *See, e.g.*, ’031 patent at 7:62-8:3.
a secondary switch control circuit coupled to sense an output quantity of a power converter and transmit a request signal when the a sensed output quantity is less than a desired output quantity and the timing circuit is in the first state, wherein the secondary switch control circuit triggers the timing circuit in response to transmitting the request signal; and	The DPR Product includes a secondary switch control circuit coupled to sense an output quantity of a power converter and transmit a request signal when the a sensed output quantity is less than a desired output quantity and the timing circuit is in the first state, wherein the secondary switch control circuit triggers the timing circuit in response to transmitting the request signal. The recited secondary switch control circuit may be found inside of the “Synchronous Rectification Control” block of the DPR Block Diagram, which generates a control signal to control a second switch, which by way of example only, may be the switch labelled “SYNC RECT”.

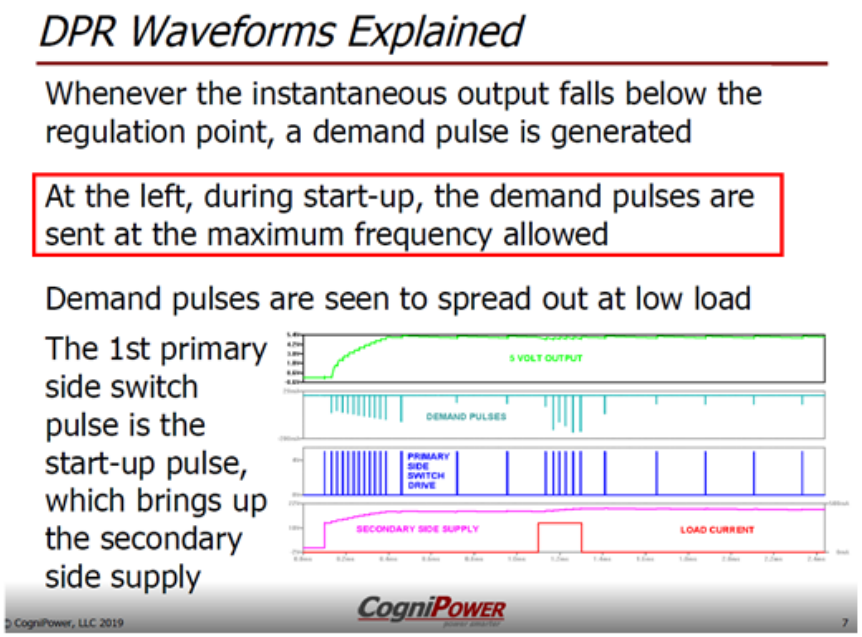
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 4 (red annotation added). The recited request signal is the “demand pulse” that is generated when the sensed output is less than the desired output quantity, or regulation point.

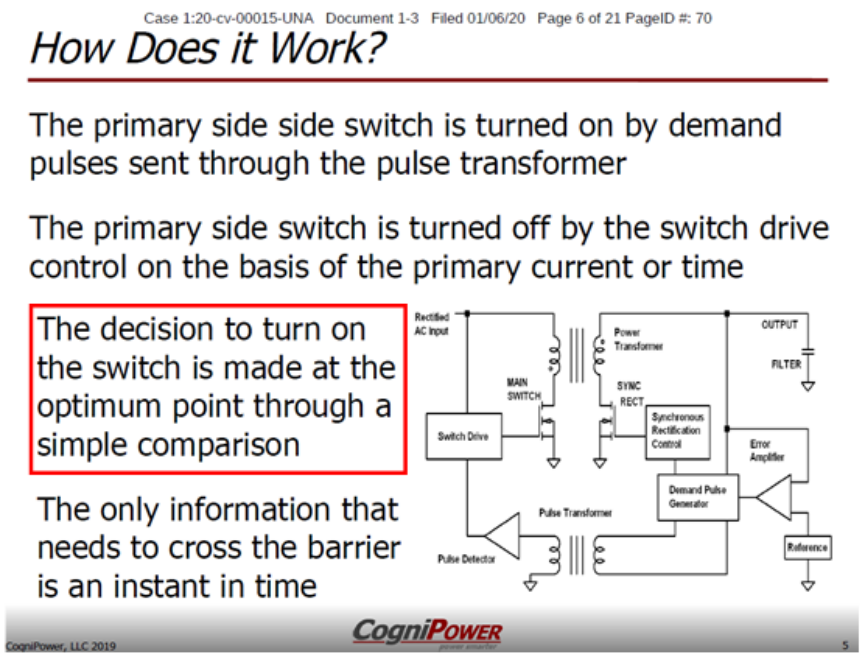
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 7 (red annotation added). The ’031 patent also describes secondary switch control circuit that generates the request signals in response to the sensed output quantity and triggers the timing circuit in response to transmitting the request signal. *See, e.g.*, ’031 patent at 8:4-38. The secondary switch control inhibits demand pulses/request signals when the output is above a reference and generates the request signals when the output is less than the reference.
a primary controller to be coupled to a power switch of the power converter and galvanically isolated from the secondary controller,	The DPR Product includes a primary controller to be coupled to a power switch of the power converter and galvanically isolated from the secondary controller, wherein the primary controller is coupled to receive the transmitted request signal and set the power switch into an ON state in response to the request signal, and wherein the

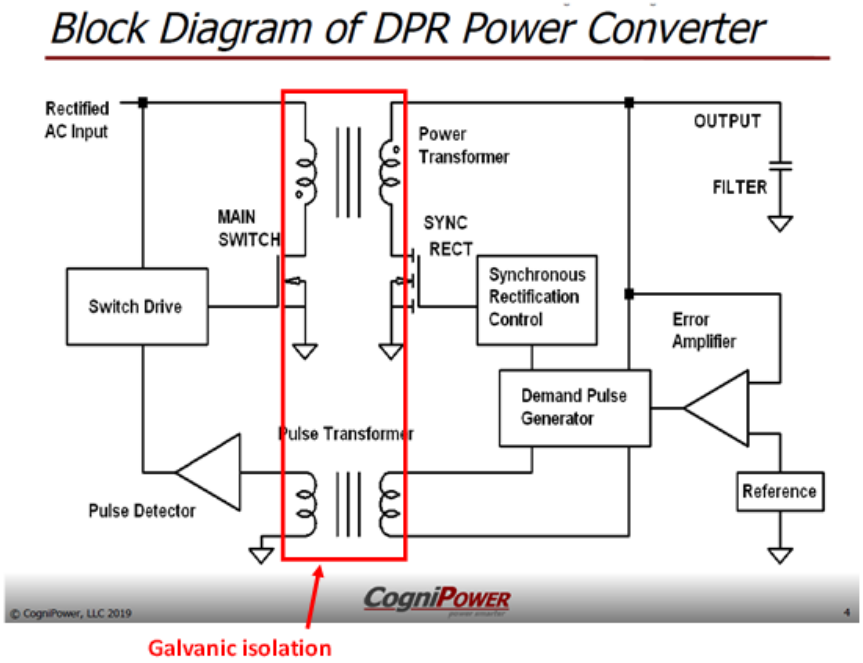
'486 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
wherein the primary controller is coupled to receive the transmitted request signal and set the power switch into an ON state in response to the request signal, and wherein the primary controller is coupled to detect a turn-off condition and transition the power switch from the ON state to an OFF state in response to detection of the turn-off condition,	primary controller is coupled to detect a turn-off condition and transition the power switch from the ON state to an OFF state in response to detection of the turn-off condition. The secondary controller is galvanically isolated from the primary controller.  APEC Presentation at 4 (red annotation added). The "transmitted request signal" is analogous to the DPR Products "Demand pulses," shown below in slide 5 of the APEC Presentation. The DPR Product includes circuitry wherein the primary controller is coupled to receive a transmitted request signals and set the power switch to an ON state in response to the received request signals. For example, according to the APEC Presentation, "[t]he primary side side (sic) switch is turned on by demand pulses sent through the pulse transformer."

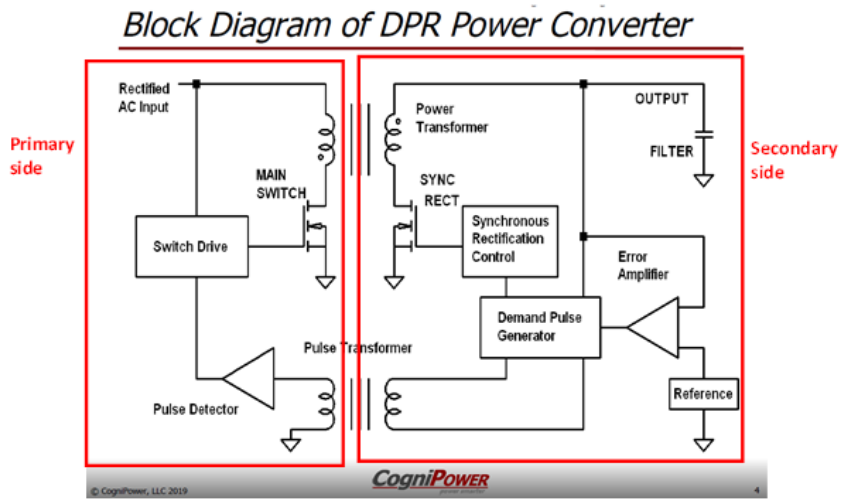
’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 5 (red annotation added). Further, the DPR Product includes circuitry wherein the primary controller is coupled to detect a turn-off condition when the power switch is in the ON state and transition the power switch from the ON state to the OFF state in response to detection of the turn-off condition.”

'486 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 5 (red annotation added). *See also* APEC Presentation at 11.
wherein the primary controller is configured to maintain the power switch in the OFF state for a threshold period of time after transitioning the power switch to the OFF state, and wherein the primary controller is configured to refrain from setting the power switch into the ON state in response to a	The DPR Product includes wherein the primary controller is configured to maintain the power switch in the OFF state for a threshold period of time after transitioning the power switch to the OFF state, and wherein the primary controller is configured to refrain from setting the power switch into the ON state in response to a subsequent request signal received during the threshold period of time. The primary converter controller is configured to maintain the power switch in the OFF state for a threshold period of time after transitioning the power switch to the OFF state.

'486 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
subsequent request signal received during the threshold period of time.	 APEC Presentation at 5 (red annotation added). The primary controller is configured to refrain from setting the power switch into the ON state in response to a subsequent request signal received during the threshold period of time.

'486 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 5 (red annotation added). Further, the '031 patent states that "it is desirable to limit maximum frequency of these ON times." The use of a maximum frequency limit in the primary controller is the same as setting a minimum time in which the power switch cannot be switched to the ON state. *See, e.g.*, '031 patent at 7:38-46.
13. The power converter controller of claim 11, wherein the power converter is an isolated power converter, wherein the secondary controller is configured to be	*See* claim 11 above. The DPR Product includes the power converter controller of claim 11, wherein the power converter is an isolated power converter, wherein the secondary controller is configured to be coupled to a secondary side of the power converter, and wherein the

'486 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
coupled to a secondary side of the power converter, and wherein the primary controller is configured to be coupled to a primary side of the power converter.	primary controller is configured to be coupled to a primary side of the power converter. The secondary controller is galvanically isolated from the primary controller.  . APEC Presentation at 4 (red annotation added). The secondary controller is configured to be coupled to a secondary side of the power converter, and the primary controller is configured to be coupled to a primary side of the power converter.

’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 4 (red annotation added).
16. The power converter controller of claim 11, wherein the request signal is a pulse, and wherein the primary controller is coupled to receive the pulse and set the power switch into the ON state in response to the pulse.	*See* claim 11 above. The DPR Product includes the power converter controller of claim 11, wherein the request signal is a pulse, and wherein the primary controller is coupled to receive the pulse and set the power switch into the ON state in response to the pulse.

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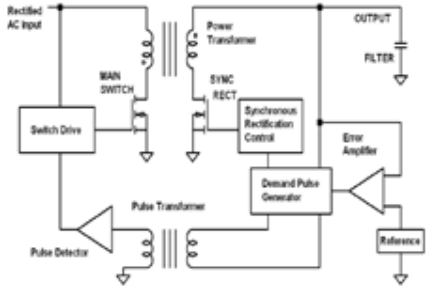
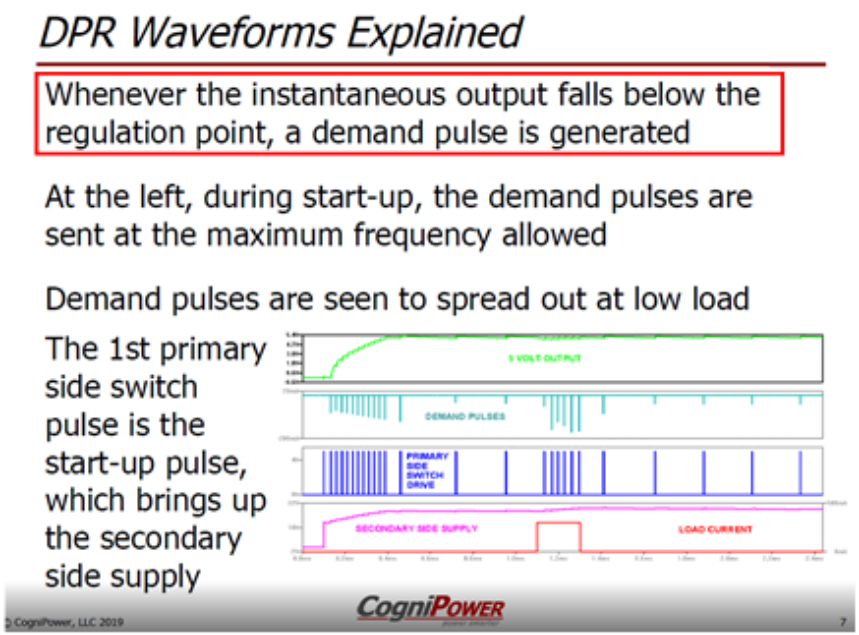
	 How Does it Work? The primary side side switch is turned on by demand pulses sent through the pulse transformer The primary side switch is turned off by the switch drive control on the basis of the primary current or time The decision to turn on the switch is made at the optimum point through a simple comparison The only information that needs to cross the barrier is an instant in time  APEC Presentation at 5 (red annotation added).

'486 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 7 (red annotation added).
17. The power converter controller of claim 11, wherein the turn-off condition includes a threshold current limit, wherein the primary controller is coupled to sense an amount of current through the power switch when the power switch is in the ON state, and wherein the primary controller is coupled to transition the power switch from the ON state to the OFF state when the	*See* claim 11 above. The DPR Product includes the power converter controller of claim 11, wherein the turn-off condition includes a threshold current limit, wherein the primary controller is coupled to sense an amount of current through the power switch when the power switch is in the ON state, and wherein the primary controller is coupled to transition the power switch from the ON state to the OFF state when the amount of current through the power switch is greater than the threshold current limit. The turn-off condition includes a threshold current limit.

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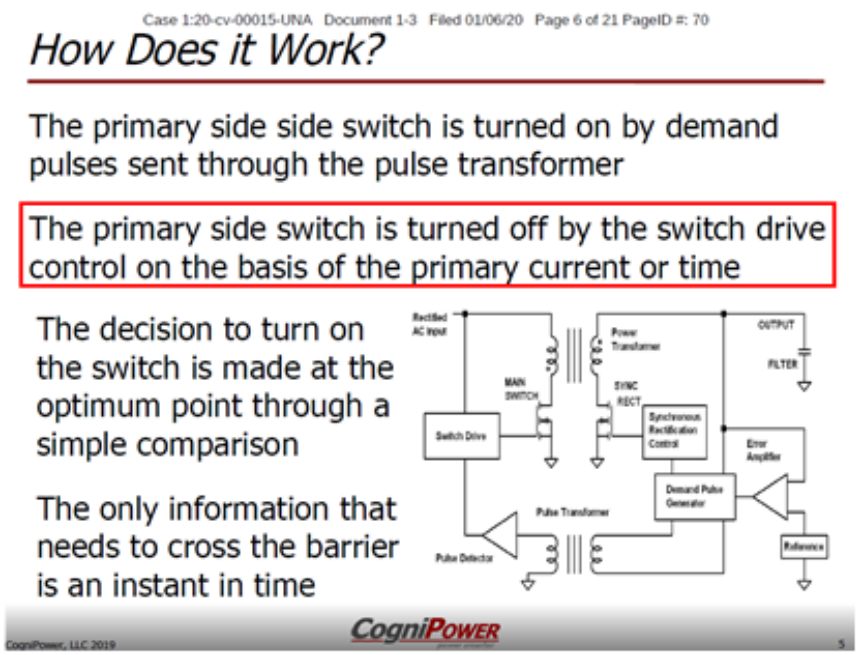
amount of current through the power switch is greater than the threshold current limit.	 APEC Presentation at 5 (red annotation added). The primary controller is coupled to transition the power switch from the ON state to the OFF state when the amount of current through the power switch is greater than the threshold current limit.

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	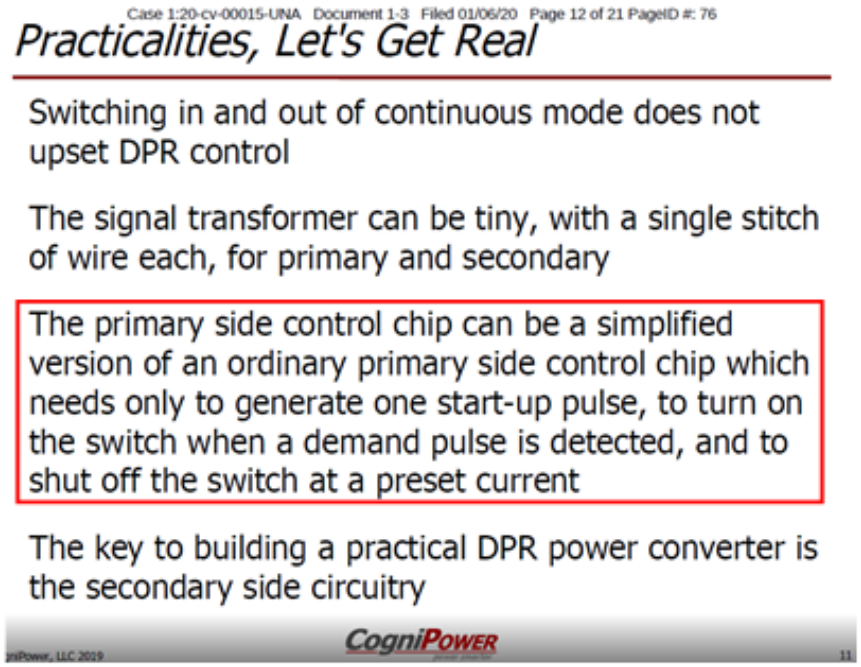 APEC Presentation at 11 (red annotation added). *See, also*, ’031 Patent at 7:15-22.
18. The power converter controller of claim 11, wherein the turn-off condition includes a threshold amount of time, and wherein the primary controller is coupled to transition the power switch from the ON state to the OFF state when the power switch has been in the ON state for the threshold amount of time.	*See* claim 11 above. The DPR Product includes the power converter controller of claim 11, wherein the turn-off condition includes a threshold amount of time, and wherein the primary controller is coupled to transition the power switch from the ON state to the OFF state when the power switch has been in the ON state for the threshold amount of time. The turn-off condition includes a threshold amount of time.

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	The '031 patent describes that the primary controller also implemented a threshold amount of time that the primary switch would be allowed to stay on. *See, e.g.*, '031 patent at 7:31-37.
20. The power converter controller of claim 11, wherein the secondary controller is coupled to transmit the request signal via a communication link, wherein the primary controller is coupled to receive the request signal via the communication link, and wherein the communication link includes at least one of an optical communication link, a capacitive communication link, and a magnetic communication link.	*See* claims 11 and 6, above.
21. A power converter comprising:	The DPR Product is a power converter.
an energy transfer element comprising a primary winding on a primary side of the power converter and a secondary winding on a secondary side of the power converter;	The DPR Product includes an energy transfer element comprising a primary winding on a primary side of the power converter and a secondary winding on a secondary side of the power converter.

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	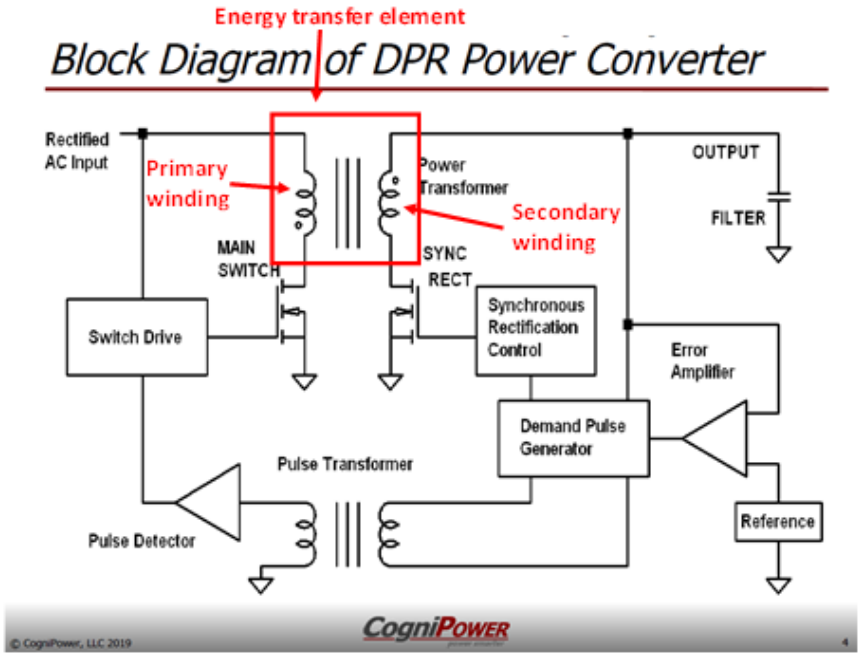 APEC Presentation at 4 (red annotation added).
a power switch coupled to the primary winding;	The DPR Product includes a power switch coupled to the primary winding

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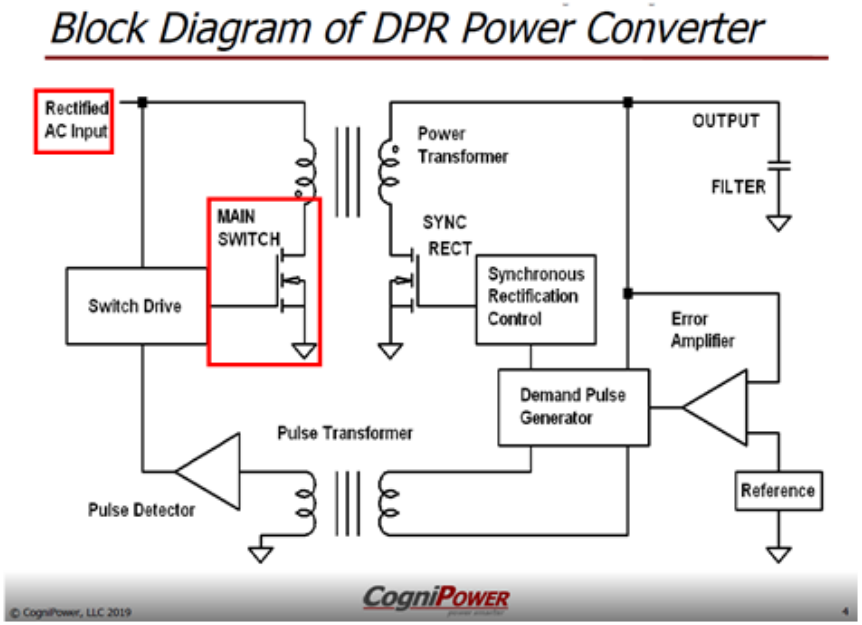
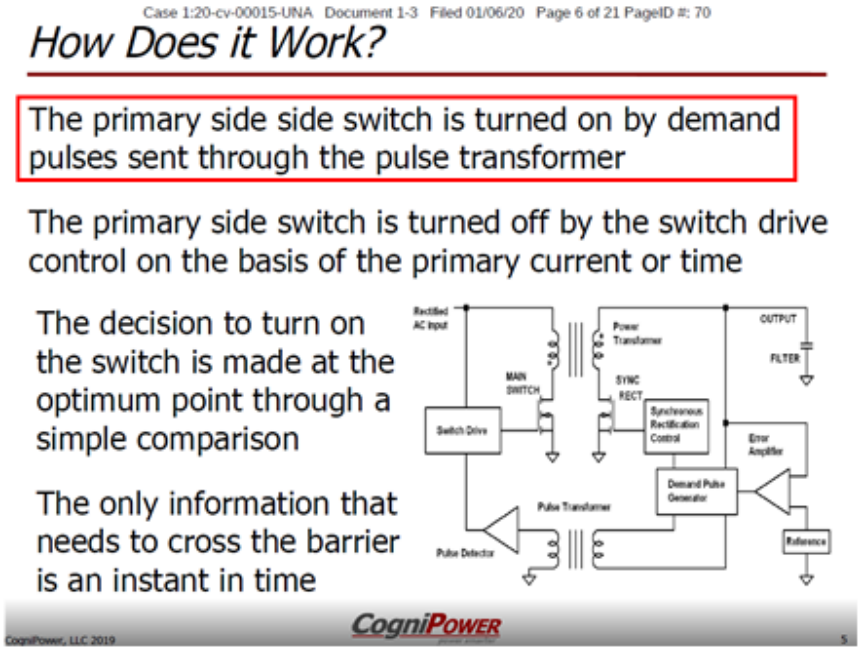
	 APEC Presentation at 4 (red annotation added).
a primary controller coupled to the power switch, wherein the primary controller is coupled to receive one or more request signals from the secondary side and transition the power switch from an OFF state to an ON state in response to each of the one or more received request signals, and wherein the primary controller is coupled to detect a turn-off condition when the power switch	The DPR Product includes a primary controller coupled to the power switch, wherein the primary controller is coupled to receive one or more request signals from the secondary side and transition the power switch from an OFF state to an ON state in response to each of the one or more received request signals, and wherein the primary controller is coupled to detect a turn-off condition when the power switch is in the ON state and transition the power switch from the ON state to the OFF state in response to detection of the turn-off condition. The "one or more request signals" are analogous to the DPR Products "Demand pulses," shown below in slide 5 of the APEC Presentation. The DPR Product includes circuitry wherein the primary controller is coupled to receive one or more

'486 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
is in the ON state and transition the power switch from the ON state to the OFF state in response to detection of the turn-off condition; and	request signals and transition the power switch from an OFF state to an ON state in response to each of the one or more received request signals. For example, according to the APEC Presentation, "[t]he primary side side (sic) switch is turned on by demand pulses sent through the pulse transformer."  APEC Presentation at 5 (red annotation added). Further, the DPR Product includes circuitry wherein the primary controller is coupled to detect a turn-off condition when the power switch is in the ON state and transition the power switch from the ON state to the OFF state in response to detection of the turn-off condition."

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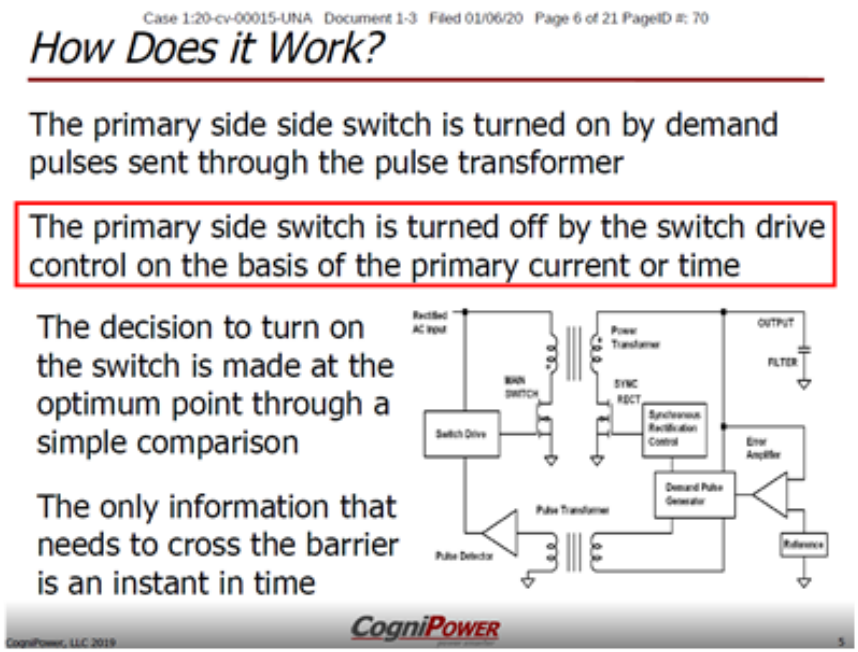
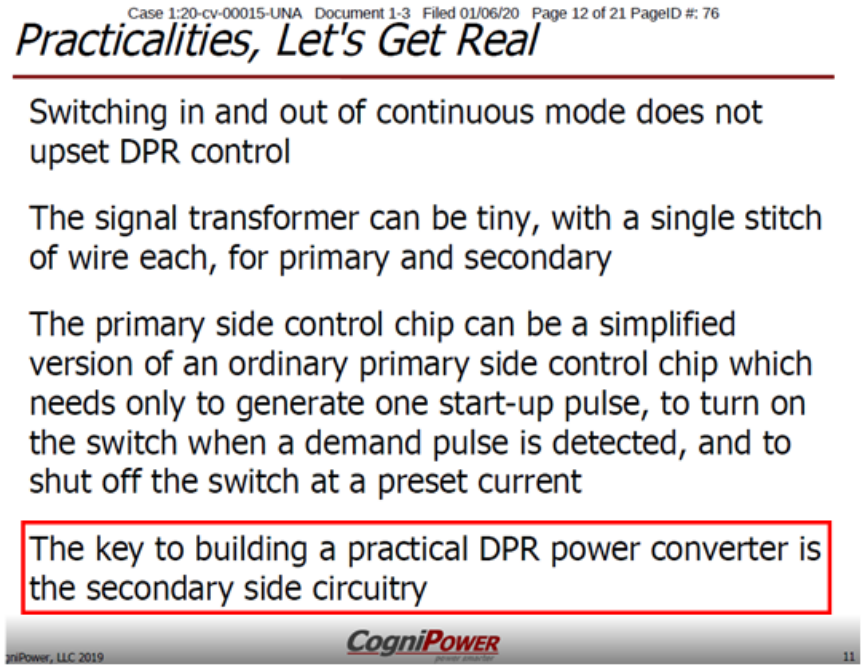
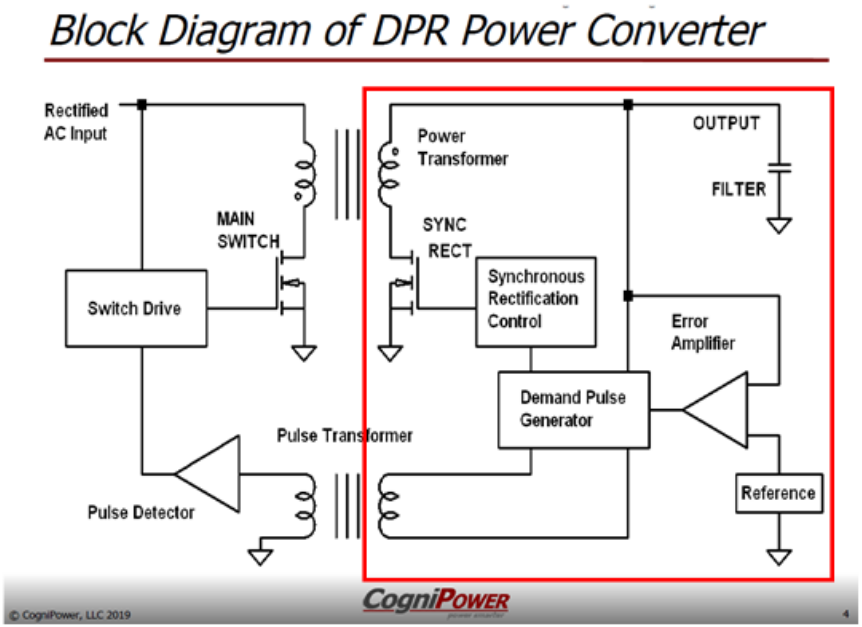
	 APEC Presentation at 5 (red annotation added). *See also* APEC Presentation at 11.
a secondary controller coupled to the secondary side and galvanically isolated from the primary controller, wherein the secondary controller is coupled to transmit the one or more request signals to the primary controller, and wherein the secondary controller is coupled to control an amount of time between	The DPR Product includes a secondary controller coupled to the secondary side and galvanically isolated from the primary controller, wherein the secondary controller is coupled to transmit the one or more request signals to the primary controller, and wherein the secondary controller is coupled to control an amount of time between the transmission of each of the one or more request signals.

’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
the transmission of each of the one or more request signals,	Because the regulation intelligence resides on the secondary side, digital interfacing is straightforward Additional communication across the isolation barrier is not required when adding additional protocols There is no compensated feedback loop required for regulation so the output can be simply set to an arbitrary, digitally chosen voltage  © CogniPower, LLC 2019 CogniPower 10 APEC Presentation at 10.

’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 11 (red annotation added).

’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
	 APEC Presentation at 4 (red annotation added).
wherein the turn-off condition is a threshold current limit and the primary controller is coupled to adjust the threshold current limit in response to an amount of time the power switch is in the ON state.	The DPR Product includes the turn-off condition is a threshold current limit and the primary controller is coupled to adjust the threshold current limit in response to an amount of time the power switch is in the ON state. The secondary controller of the DPR product is coupled to control an amount of time between the transmission of each of the request signals: “Whenever the instantaneous output falls below the regulation point, a demand pulse is generated.”

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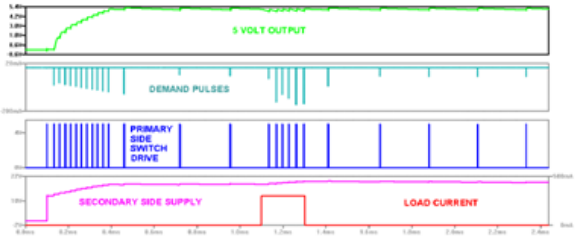
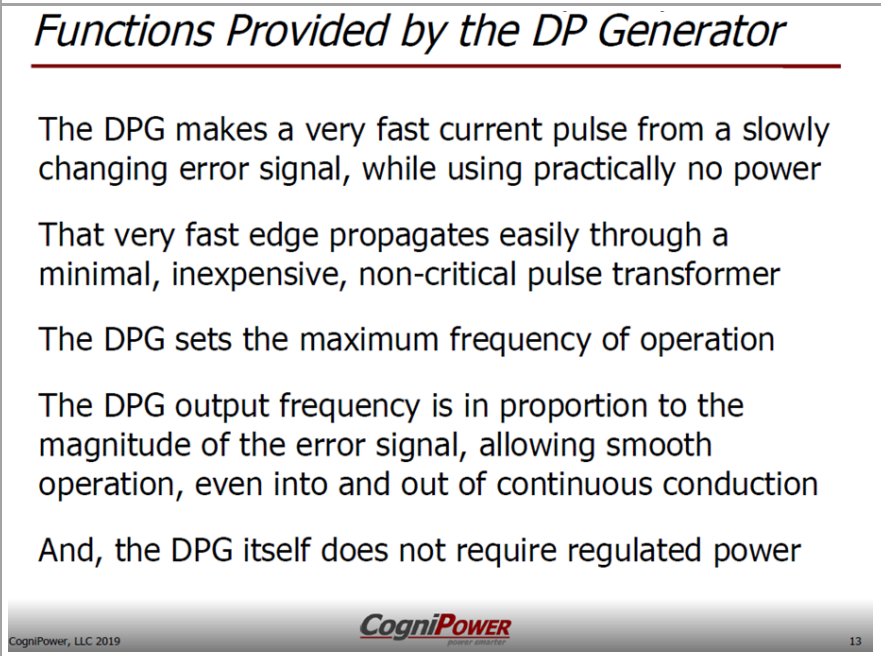
	DPR Waveforms Explained Whenever the instantaneous output falls below the regulation point, a demand pulse is generated At the left, during start-up, the demand pulses are sent at the maximum frequency allowed Demand pulses are seen to spread out at low load The 1st primary side switch pulse is the start-up pulse, which brings up the secondary side supply  © CogniPower, LLC 2019 CogniPower 7 APEC Presentation at 7 (red annotation added).

'486 Patent Claim	CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")
	 APEC Presentation at 13.
22. The power converter of claim 21, wherein the secondary controller includes a timing circuit that sets a minimum amount of time between the transmission of each of the request signals.	*See* claims 21 and 3, above.
23. The power converter of claim 21, further comprising a communication link, wherein the secondary controller is coupled to transmit the one or more request	*See* claims 21 and 6, above.

’486 Patent Claim	CogniPower 2019 APEC presentation “Simplifying Efficient Low Power AC/DC Converters” (“APEC Presentation”) and associated prototype product based on Demand Pulse Regulation (“DPR Product”)
signals via the communication link, wherein the primary controller is coupled to receive the one or more request signals via the communication link, and wherein the communication link includes at least one of an optical communication link, a capacitive communication link, and a magnetic communication link.	
25. The power converter of claim 22, wherein the timing circuit is coupled to operate in a first state until triggered to operate in a second state, wherein the timing circuit is in the second state for a holding period and transitions back to the first state at an end of the holding period, and wherein the holding period sets a minimum amount of time between the transmission of two consecutive request signals.	*See* claims 22 and 8, above.
26. The power converter of claim 25, wherein the secondary controller includes a secondary switch control circuit coupled to sense an output quantity of the power converter and transmit one of the request signals to the primary controller when the	*See* claims 25 and 9 above.

'486 Patent Claim	**CogniPower 2019 APEC presentation "Simplifying Efficient Low Power AC/DC Converters" ("APEC Presentation") and associated prototype product based on Demand Pulse Regulation ("DPR Product")**
sensed output quantity is less than a desired output quantity and the timing circuit is in the first state, and wherein the secondary switch control circuit triggers the timing circuit in response to transmitting the one or more request signal.	